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ABSTRACT

This document reports on findings of the studies on vocational education that the Education Amendments of 1976 directed the National Institute of Education to conduct. The introduction overviews these studies of vocational education programs conducted under the Vocational Education Act of 1963 (VEA) and other related programs conducted under the Comprehensive Employment and Training Act (CETA). A summary of findings and conclusions follows. Chapter 1 describes federal vocational education policy, specifically the VEA. Chapter 2 considers allocation provisions for vocational education funds, including the federal and states' formulas. Chapter 3 discusses distribution of vocational education resources by four objects: enrollments, services, target populations, and occupations. Examination of the evaluation requirements of the 1976 amendments is found in chapter 4. Chapter 5 describes different forms of coordination between the VEA and CETA. Chapter 6 reports on a study of Consumer and Home Economics programs to determine content, kinds of students, influence of 1976 legislation, and effects on learners. The concern of chapter 7 is effect of participation in vocational education on learners. Chapter 8 examines the effectiveness of the VEA in equalizing opportunities to and in vocational education. Chapter 9 assesses the means provided in the VEA to realize federal policy goals. (YLB)

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The Vocational Education Study: The Final Report

Vocational Education Study Publication No. 8

September 1981

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FOREWORD

This document reports on findings of the studies on vocational education that the Education Amendments of 1976, Public Law 94-482, directed the National Institute of Education to conduct. It is The Final Report required by the statute to be transmitted to the President and the Congress. With it the Institute fulfills its statutory reporting obligations, for The Interim Report was transmitted to the President and the Congress on September 30, 1980.

I am satisfied that the Institute's Vocational Education Study has been responsive to the directions for inquiry set forth in the statutory charge in focusing primarily upon the four studies specified: the distribution of vocational educational funds, issues of compliance with the applicable laws, the means for assessing program quality and effectiveness, and Consumer and Homemaking Education programs. It has, moreover, sought to provide information, analyses, judgments, and perceptions that would not only contribute to a balanced understanding of Federal vocational education policy but would also be useful in formulating future legislation.

The legislation establishing the Department of Education, Public Law 96-88, created the Federal Interagency Committee on Education (FICE) and directed it to conduct a two-year study of vocational education, which was to have been completed coincidentally with the transmittal date of The Final Report. To avoid duplication of effort, the Secretary of Education, Terrel H. Bell, has held that the FICE study be conducted through delegation to the National Institute of Education. FICE is to review and comment upon the Institute study at an early date.

The Introduction to The Final Report recounts briefly how the study was carried out. On behalf of the Institute, I commend the staff of the Vocational Educational Study, which, under the able direction of Henry David, carried out a difficult task with skill, objectivity, and dedication.

Edward A. Curran
Director

September 1981

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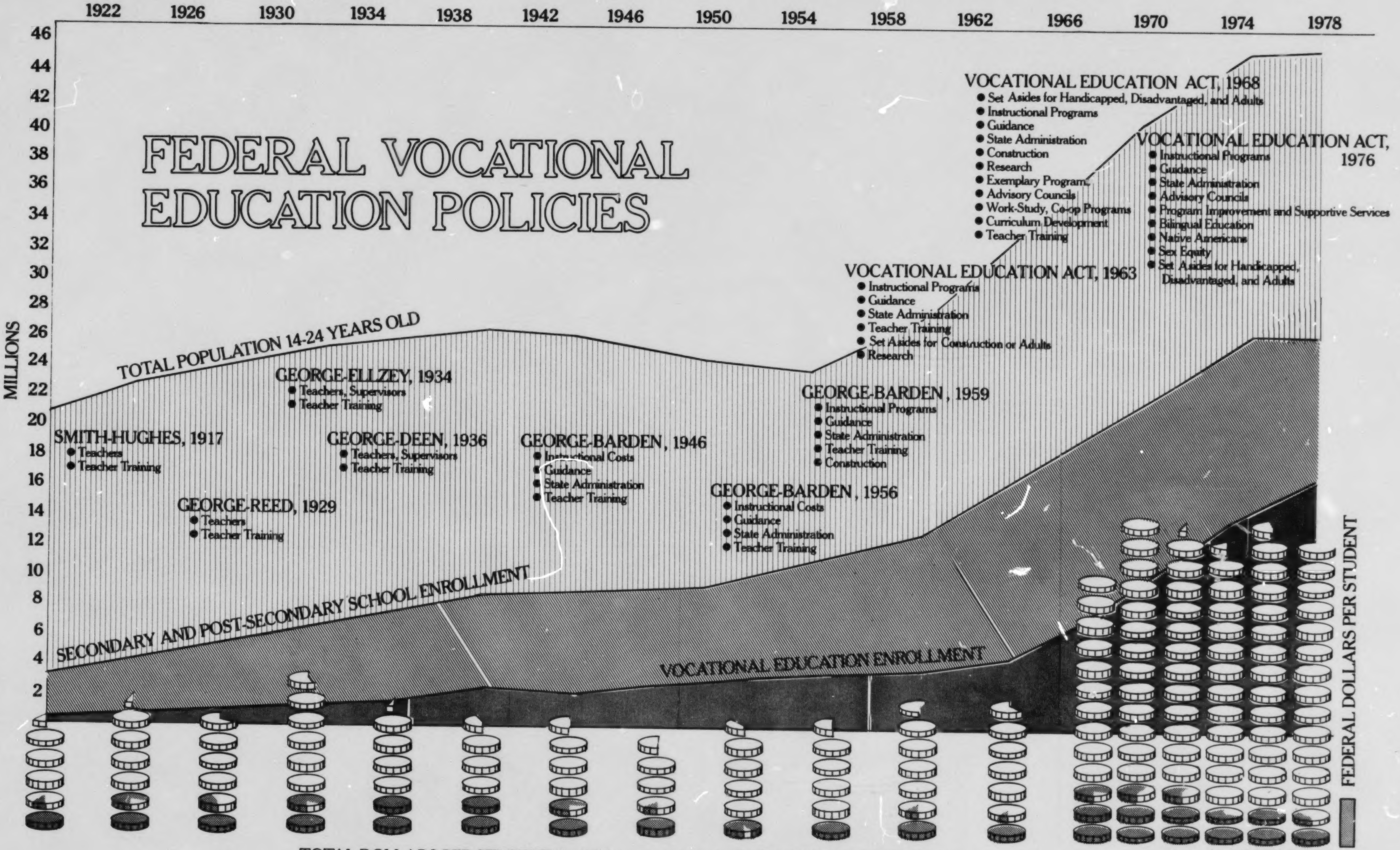
FEDERAL VOCATIONAL EDUCATION POLICIES



SMITH-HUGHES, 1917
- Teachers
- Teacher Training

GEORGE-REED, 1929
- Teachers
- Teacher Training

GEORGE-ELLZEY, 1934
- Teachers, Supervisors
- Teacher Training

GEORGE-DEEN, 1936
- Teachers, Supervisors
- Teacher Training

GEORGE-BARDEN, 1946
- Instructional Costs
- Guidance
- State Administration
- Teacher Training

GEORGE-BARDEN, 1956
- Instructional Costs
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GEORGE-BARDEN, 1959
- Instructional Programs
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- Teacher Training
- Construction

VOCATIONAL EDUCATION ACT, 1963
- Instructional Programs
- Guidance
- State Administration
- Teacher Training
- Set Asides for Construction or Adults
- Research

VOCATIONAL EDUCATION ACT, 1968
- Set Asides for Handicapped, Disadvantaged, and Adults
- Instructional Programs
- Guidance
- State Administration
- Construction
- Research
- Exemplary Programs
- Advisory Councils
- Work-Study, Co-op Programs
- Curriculum Development
- Teacher Training

VOCATIONAL EDUCATION ACT, 1976
- Instructional Programs
- Guidance
- State Administration
- Advisory Councils
- Program Improvement and Supportive Services
- Bilingual Education
- Native Americans
- Sex Equity
- Set Asides for Handicapped, Disadvantaged, and Adults

Prepared by the Social Graphics Co.
For the Vocational Education Study.
National Institute of Education.

INTRODUCTION

The themes treated in this Final Report on the Vocational Education Study reflect the charge given to the National Institute of Education by the Education Amendments of 1976 (P.L. 94-482), approved October 12, 1976, which was then amended by P.L. 95-40, approved June 3, 1977. Title V, Section 523(b) of the statute directs the Institute to undertake "a thorough evaluation and study of vocational education programs conducted under the Vocational Education Act of 1963, and other related programs conducted under the Comprehensive Employment and Training Act of 1973 and by the State Post-Secondary Commissions authorized by the Education Amendments of 1972." The legislation required the inquiry to include:

> (A) a study of the distribution of vocational education funds in terms of services, occupations, target populations, enrollments, and educational and governmental levels and what such distribution should be in order to meet the greatest human resource needs for the next 10 years;
>
> (B) an examination of how to achieve compliance with, and enforcement of, the provisions of applicable laws of the United States;
>
> (C) an analysis of the means of assessing program quality and effectiveness; . . . and
>
> (F) a review and evaluation of the effectiveness of programs funded under subpart 5 of part A of the Vocational Education Act of 1963 [which contains the Consumer and Homemaking Education provisions of the law] and to make recommendations for the redirection and improvement of programs at all levels funded under such subpart.

In addition, the mandate called upon the Institute to make "findings and recommendations, including recommendations for changes in" the existing legislation "or for new legislation. . . ." The Institute was also authorized to attempt to secure funds from the United States Commissioner of Education and the Secretary of Labor to conduct as many as three "experimental programs" that would contribute to the first three required studies. Such funds could not be secured.

The legislation provided for up to $1 million a year, "for each of the fiscal years ending prior to October 1, 1981," to support the study. The funds were made available to the Institute through transfers from the Basic Grant and Program Improvement and Supportive Services monies appropriated for the Vocational Education Act. The legislation also allocated 10 percent of those funds to the Study of Consumer and Homemaking Education programs. This resource base has been amplified through funds provided by the Institute itself, the Bureau of Occupational and Adult Education of the U.S. Office of Education, the National Advisory Council on Vocational Education, and the National Center for Research on Vocational Education at The Ohio State University. Governmental agencies and officials at all three levels of government, as well as private organizations, have assisted the Study by contributing data, information, and services, including the administration of surveys.

The legislation called for three products: a plan for the Study, to be submitted to the Congress for review and approval by the close of 1977; an interim report, which the Institute transmitted to the President and the Congress on September 30, 1980; and a final report, to be transmitted a year later to the President and the Congress. In stipulating that the two "reports shall not be submitted to any review outside of the Institute before their transmittal to the Congress," the law sought to assure independence and objectivity in the conduct of the Study and disinterest and neutrality in reporting its results.

The Study sought to contribute to the field of vocational education by reporting on selected aspects of its investigations. To this end, the Institute has already published, in addition to A Plan for the Study of Vocational Education (1977) and The Interim Report (1980), the following:

The Planning Papers for the Vocational Education Study (1979)

The Planning Papers on Consumer and Homemaking Education Programs (1979)

Basic Skill Proficiencies of Secondary Vocational Education Students (1980)

Evaluating Vocational Education: The Federal Stimulus (1981)

A Portrait of Rural America: Conditions Affecting Vocational Education Policy (1981)

Another monograph, the Coordination of Federal Programs: Vocational Education and CETA, is in press.

It is also the Institute's intention to publish subsequently on several subjects investigated during the course of the Study, including the future of the vocational education enterprise, vocational education in urban areas, the basic skills of vocational education students, and vocational education for students with special needs.

The Study Plan outlined the research strategies not only for investigating the four topics specified in the mandate but also for conducting a policy inquiry, centering on the purposes, structure, implementation, and consequences of Federal vocational education policy. Such an inquiry would seek to ascertain in which respects, if any, the 1976 amendments to the 1963 Vocational Education Act influenced changes in the Nation's decentralized and highly diversified public school vocational education enterprise.

In Federal law, that enterprise is formally defined as "organized educational programs which are directly related to the preparation of individuals for paid or unpaid employment, or for additional preparation for a career requiring other than a baccalaureate or advanced degree. . . (P.L. 94-482, Sec. 195(1))." The scale and characteristics of the enterprise are shaped by policies made at each level of government--local, State, and Federal. Localities and States are responsible for operating educational programs and providing related services, as well as for the governance of the larger public educational system of which vocational education is a part. Even though it is national in scale and reflects national purposes, the vocational education enterprise is not a single system. It is a collection of different State systems and is characterized by diversity.

Salient features of that pluralistic enterprise were delineated in Chapter VI of The Interim Report, and are described and analyzed in this Final Report, particularly in Chapter III. The Study's "Occupational Education and Training: A Data Book," scheduled for later publication, will provide information on the national investment made in the acquisition of occupational knowledge and skills, of which the investment in public school vocational education is a part.

The Institute's conduct of the Study has been sketched in status reports, Chapter I of The Interim Report, and elsewhere. There is good reason, however, to relate briefly here how the Congressional mandate has been carried out. More than three-fifths of the resources for the Study were allocated to extramural research and support activities. The titles of the Study's extramural research projects and the technical papers it commissioned are listed in Appendix A. The remaining resources were used to meet intramural administrative and research costs. Intramural research efforts were devoted to such topics as vocational education in rural and sparsely settled areas; the effectiveness of consumer and homemaking education programs; vocational education programs for the incarcerated; coordination between vocational education and Comprehensive Employment and Training Act (CETA) programs; basic skills of vocational education students; evaluation issues and practices in vocational education; and vocational education in urban areas.

Six major contracts for research were awarded through the competitive procurement process. One, awarded to the School of Education of the University of California at Berkeley, was for a study of the "Distribution of Federal, State, and Local Vocational Education Funds." It had three objectives: to examine and evaluate existing national data bases on vocational education; to analyze the funding policies and practices of the States and the actual flow of funds to local education agencies in 15 States; and to examine the distribution and utilization of Federal, State, and local vocational education funds in terms of services, occupations, enrollments, and target populations.

A second contract was awarded to Abt Associates, Inc., for a study of "State and Local Compliance and Evaluation Practices." The study was to inquire into State and local behavior in 15 States with respect to the spirit and letter of Federal legislation and to assess its effects with respect to planning, evaluation, funds distribution, equity objectives, and coordination between CETA and vocational education programs. A third study, on the "Responsiveness of the Consumer and Homemaking Education System at State and Local Levels," conducted through a contract awarded to CRC Education and Human Development, Inc., examined the extent to which consumer and homemaking education (C&HE) programs, activities, and services in 10 States correspond to the intentions of Federal legislation and also the implementation of those intentions on Federal, State, and local levels.

A fourth contract, awarded to A. L. Nellum and Associates, Inc., provided for a study on "Meeting the Special Needs of Special Groups." This inquired into how and to what extent the needs for vocational education on the part of special groups identified in Federal legislation were being met in 15 communities. Award of a contract to The Huron Institute provided for a fifth study, "The Effects of Participating in Vocational Education." It sought to determine the shorter- and longer-term economic and noneconomic outcomes for the participants of secondary and postsecondary vocational education programs. This study also sought to determine levels of proficiency in basic skills attained by secondary vocational education students.

The sixth and final major contract, awarded to the Lawyers' Committee for Civil Rights Under Law, was for a study called "The Analysis of Federal Legal and Regulatory Framework for Implementation of Vocational Education Legislation." Key topics in this study are the consistency, clarity, and comprehensiveness of that framework; Federal and State interpretations of the legislation; incentives and sanctions bearing on compliance with Federal laws; and Federal agency implementation of the legislation.

The extra- and intramural research efforts are interrelated and complementary. The results of both have informed the preparation of the Final Report, as have other sources including research and survey reports, official documents, and agency correspondence files. The extramural research relied heavily upon field work conducted in States and localities, involving in most inquiries five common, so-called "core" States: California, Florida, Illinois, New York, and Texas. For the Study as a whole, field work has been conducted in the 27 States shown in Appendix B.

All present members of the Vocational Education Study staff have contributed to the conception and preparation of the Final Report. It is the fruit of an integrated, collective effort. The names and periods of service of present and past staff members appear in Appendix C. However, it is appropriate to record the distinctive contributions made by the present staff members to the body of this Report. Gerry Hendrickson and Henry David were primarily responsible for preparing Chapters I, IV, and IX; Stuart Rosenfeld for Chapters II and III; Rodney Riffel for Chapter V; Louise Corman for Chapters VI and VII; and Bella Rosenberg for Chapter VIII.

The work of the Vocational Education Study has been facilitated in numerous ways by Marc S. Tucker, Associate Director of the Program on Educational Policy and Organization, and his colleagues. Other units within the Institute provided technical assistance from the inception of the Study. Special mention must to made of the indispensable contributions in launching the Study made by Corinne Rieder and Lois-ellin Datta, then in the Institute's program on Education and Work. The Study benefited greatly from the wise counsel and generous support provided by Michael Timpane, former Director of the Institute, and from the welcome advice and assistance proffered by his successor, Acting Director Milton Goldberg.

The Vocational Education Study is in debt to the members of its Consultant Group, whose names are listed in Appendix D. They have illuminated the issues on which their advice was solicited not only by bringing to bear upon them varied viewpoints and experiences but also by being tough-minded and frank critics. The Study also owes a debt of gratitude to a host of scholars, vocational education administrators and teachers, officers of professional societies, and local, State, and Federal officials. They have eased and enriched the Study's work by generously providing information, analyses, and advice. The Study's staff is grateful to all who have helped and hastens to absolve them of any errors of commission or omission in this Final Report.

Henry David
Director
Vocational Education Study

Gerry Hendrickson
Assistant Director
Vocational Education Study

FINDINGS AND CONCLUSIONS

The Nation's public school vocational education enterprise is governed and operated by States and localities but shaped by purposes and policies that are Federal, as well as State and local. It is pluralistic and diversified in structure and governance and constitutes a multiplicity of different systems which have key characteristics in common. In Federal law, this enterprise is formally defined as "organized educational programs . . . directly related to the preparation of individuals for paid or unpaid employment, or for additional preparation for a career requiring other than a baccalaureate or advanced degree." These programs, which number more than 400, fall into seven major occupational fields and one nonoccupational field, consumer and homemaking education. The occupational fields are agriculture, distributive, health, occupational home economics, business and office, technical, and trade and industry.

It is a large national enterprise on which State and local governments report they spent almost $6 billion in recent years. Federal expenditures under the provisions of the Vocational Education Act of 1963, as amended, come to some $700 million. It has more than 17 million students enrolled in federally-funded courses and programs of study. Of these, about 7 million are enrolled in occupationally specific vocational programs.

About three-fifths of all enrolled students are in high school programs and the remainder are in postsecondary and adult programs. The programs are offered in a variety of settings, including comprehensive high schools, two- and four-year postsecondary institutions, area vocational centers, and specialized secondary and postsecondary vocational schools and technical institutes. All the Nation's public educational institutions offering vocational programs probably number close to 20,000 and employ more than 370,000 full- and part-time teachers.

I

Federal purposes, together with Federal funds, have been embedded in the vocational education enterprise since the adoption of the Smith-Hughes Act in 1917. The Vocational Education Act of 1963 marked a departure from past Federal policy. Seeking its reform and redirection, the Act established an agenda for change in the vocational education enterprise. Two major revisions of the Vocational Education Act, the first effected with the Amendments of 1968 and the second with the Education Amendments of 1976, P.L. 94-482, reaffirmed the purposes of Federal vocational education policy and sought to realize them more fully.

The 1976 legislation also directed the National Institute of Education to undertake a study of vocational education programs and Federal education policy. The resulting Vocational Education Study has centered on the purposes, structure, implementation, and consequences of Federal policy, especially on the 1976 amendments to the Vocational Education of 1963. Through this document, the Final Report, and the preceding Interim Report, the National Institute of Education fulfills its mandated responsibility to report on the study to the President and the Congress.

II

Federal policy establishes ambitious goals to be achieved by the States with the assistance of grants. In the words of the Declaration of Purpose of the Vocational Education Act of 1963, as amended, Federal policy seeks to assure

> that persons of all ages, in all communities of the State, those in high school, those who have completed or discontinued their formal education and are preparing to enter the labor market, those who have already entered the labor market, but need to upgrade their skills or learn new ones, those with special educational handicaps, and those in postsecondary schools, will have ready access to vocational training or retraining which is of high quality, which is realistic in the light of actual or anticipated opportunities for gainful employment, and which is suited to their needs, interests, and ability to benefit from such training (Sec. 101).

Realization of the interrelated social and economic goals of Federal policy depends heavily upon decisions made at State and local levels. The grant of Federal funds, awarded on the basis of an approved State plan, carries with it a commitment by the recipient State that it will implement certain processes, procedures, and programs which are a means for achieving the long-term goals of Federal policy. These means, which affect critically the uses to which Federal funds are put, are also the intermediate goals of Federal policy. Thus, distributing Federal funds to poor areas is a goal in its own right as well as a means by which Federal legislation seeks to assist the States in providing ready access to vocational education programs of high quality to all persons. To understand how the Vocational Education Act works it is essential, therefore, to understand the interplay among (1) the Federal assistance provided to the States to help them attain the long-term goals of Federal policy; (2) the legislated means for realizing those ends, in themselves constituting intermediate goals; and (3) the scale of the Federal resources for assisting the States.

The 1976 legislation made important changes in the means for realizing the ends of Federal policy. That legislation is complex and detailed. It may be characterized as prescriptive in the processes and procedures it requires but permissive in the discretion it allows the States in deciding upon the uses to which they may put the Federal grants-in-aid it authorizes. Because it is ambiguous in some respects, uncertainty has marked its implementation.

The principal provisions of the 1976 legislation have to do with

- Distributing funds to areas lacking the resources to meet vocational education needs
- Providing programs and services to students who are handicapped, disadvantaged, or whose English-proficiency ability is limited
- Overcoming sex bias and sex stereotyping in vocational education
- Improving planning for the use of all resources
- Encouraging change in and improvement of the Nation's vocational education enterprise
- Strengthening evaluations of programs

The Act's Declaration of Purpose speaks of "ready access to vocational training or retraining which is of high quality." The first three of the objectives just listed may be linked primarily to the aspiration of equality of opportunity in vocational education--"ready access"--and the related last three primarily to assuring that the institutions and programs for vocational education and training are of "high quality."

III

Distributing Funds to Areas

The ways by which Federal funds are distributed to areas and are earmarked to benefit certain groups of individuals are crucial to realizing Federal policy objectives. The 1976 legislation and subsequent regulations prescribe in greater detail than did earlier laws how States and territories are to distribute Federal dollars to eligible recipients within their jurisdictions with the use of formulas. Examination of the prescribed procedures for distributing funds to areas lacking resources, the interpretations of the procedures by Federal officials, first of the U.S. Cffice of Education and later of the U.S. Department of Education, of their implementation by the States, and the results of their use leads to seven key findings:

(1) VEA funds are distributed to States and territories with little regard to differences among them in fiscal capacity and no regard to the relative costs of education.

> The formula for distributing Federal funds among the States and territories does not take into account differences among them in the relative costs of education and only in small part recognizes differences in fiscal capacity. The size of various age cohorts in the States, adjusted for the relative median per capita income of the States, determines the State allotments. Per capita income, however, affects the costs of education in each State, and thus the need for VEA funds. The present allotment procedure favors States with low average income, but without regard for the States' wealth, relative costs of programs, or the scale of programs. Consequently, some States that have high per capita incomes but relatively limited fiscal resources and high costs of education receive less than States with low per capita income but with ample fiscal resources and low costs of education.

(2) Aspects of the intrastate distribution procedures are ambiguous, lack clarity, and are faulty.

> The procedures are ambiguous in two important respects: they do not stipulate, first, how the distribution and priority factors are to be combined to produce allocations and, second, how much weight in the formulas is to be given to factors designated as most important in the statute. The differences between distribution factors and application approval priorities remain to be clarified, with the result that application approval priorities are usually treated as distribution factors. There is also ambiguity about how to take account of enrollments. Some States have been directed to develop a formula in which factors are

multiplied by the number of students enrolled. Others merely add enrollment as another factor to the formula. Since the 1976 legislation became operational, inconsistent signals have been given to the States on the intrastate distribution of Federal funds because of ambiguities in the legal framework and inconsistencies in interpretation.

The procedures lack clarity with respect to the number and kind of additional factors that States may use in their formulas. As a result, States may add factors that reduce and even counteract the effects of the mandated factors. The procedures are also not clear with respect to the manner in which factors may be used. States may group measures into such loose categories as "high," "medium," or "low." This serves to eliminate significant differences between some recipients.

The measures that the States are instructed to use to represent the distribution factors and the application approval priorities are sometimes faulty. Federal officials describe some measures that are not available in all States by recipient. For example, assessed property wealth per capita has been selected to represent relative financial ability, even though such data are not available at the school district level in most States. The alternative measure of assessed property value per student, which is readily available in all States, could have been approved.

(3) The intrastate distribution procedures permit States to allocate Federal funds in line with goals and priorities which may or may not be congruent with those of Federal policy.

States may use in their formulas as many social, economic, or demographic factors relating to the need for vocational education as they wish. They may assign such weights to each factor as they wish, as long as the two prescribed distribution factors are given the greatest weights. Under the requirements, States can devise procedures resulting in almost any distribution patterns they may desire. Consequently, the procedures adopted vary greatly among States, and the way Federal funds are in fact distributed may not advance the national objectives of Federal policy.

(4) The many factors driving the intrastate distribution of Federal funds are not always mutually reinforcing.

Federal funds are required to be distributed intrastate with respect to relative financial ability and concentrations of low income people, and with priority to areas that are depressed and have high rates of unemployment and lack resources to provide high quality programs, and introduce new programs for new and emerging occupations. All these conditions are not necessarily found to the same extent in the same eligible recipients. A district with high unemployment may also have high relative financial ability measured by property wealth. A district with high financial ability measured by property wealth may have a high concentration of low income people. Districts able to initiate new programs for new and emerging occupations are likely to have adequate resources, with the result that this priority favors wealthier, and not poorer, districts. Since the different factors are not necessarily mutually reinforcing and may even offset one another, actual distributions of funds appear more random than systematic.

(5) The effects of the required procedures on the distribution of Federal funds were weak and inconsistent in fiscal year 1979.

The procedures produced different results among the States. There were occasional examples of a particular factor being responsible for a significant effect in a State, but no patterns of significant effects for all States could be discerned. Districts with limited fiscal capacity did not receive a large enough share of the States' allotments of Federal funds to improve significantly their ability to provide programs of high quality. Nor did areas with high unemployment receive large enough shares of the allotments to provide needed vocational education programs. Areas with high concentrations of low income families did not receive large enough shares of the allotments to make an appreciable difference in the resources available to them. In fiscal year 1979, in short, the effects of the distribution requirements designed to drive Federal funds to areas lacking resources were marginal.

(6) Federal grants, the instrument for assisting States, have been too limited in scale to help the States with the task of realizing all the objectives of Federal policy.

Federal funds are expected to help States in providing districts with needed fiscal resources, stimulating the extension and improvement of programs, providing programs and services for populations with special needs, and achieving other objectives.

Yet the Federal funds available to the States in recent years, for example, would not be sufficient to help correct inequalities among districts in the resource base for vocational education alone or to assure programs and institutions of high quality nationwide. To bring the level of resources of all districts up to the average district would not only require more Federal funds than are now allotted to the States but also assurance that States would not change their present commitments to the principle of equalizing local educational resources.

Programs and Services for Special Needs Students

One of the key objectives of the Vocational Education Act, as amended, is to assist the States to improve their capacity to provide vocational education programs and services to students who are handicapped, or disadvantaged, or whose English-speaking proficiency is limited. The chief provisions for realizing this goal are the special needs set asides and the fully federally funded Special Programs for the Disadvantaged. Examination of these provisions and their regulations, as well as their implementation by States and localities, reveals that:

(1) The successive amendments to the Vocational Education Act of 1963, in combination with civil rights laws and other legislation, have stimulated the States to make a greater effort to serve students with special needs.

The idea of reserving Federal funds for the purpose of assisting and stimulating the States to provide programs and services to students with special needs is a sound approach to attaining greater equality of opportunity in vocational education. In the absence of such a provision, States and localities would very probably not be devoting even the relatively modest resources they now do to serving handicapped, disadvantaged, and limited English-proficient students. Nevertheless, Federal objectives with respect to students with special needs are imperfectly advanced by the present requirements of the Vocational Education Act.

(2) The manner in which the excess costs and matching requirements are interpreted and implemented may inhibit localities from spending Federal funds to provide programs and services for students with special needs and creates a disincentive to mainstreaming these students in regular classes.

> The excess costs requirements impose recordkeeping burdens that many localities find difficult to shoulder. Smaller and rural districts are especially hard pressed to account for excess costs and are therefore likely to be deterred from applying for and receiving Federal funds to serve students with special needs. Some States or LEAs are unable or reluctant to find matching funds for these set asides, a problem which the 1979 Technical Amendments to the Vocational Education Act sought to alleviate by permitting the use of Federal funds for match purposes. Regulations for this legislation had not been issued by September 1981, and States have not yet been able to take advantage of the possibility for a reduced match. States are having far less difficulty spending monies on the Special Programs for the Disadvantaged which are fully federally funded and which are similar in design or targeting to those supported by the set aside for the disadvantaged.
>
> The interpretation of the excess costs requirements creates a disincentive to mainstream handicapped or disadvantaged students in regular classes. Excess costs for handicapped or disadvantaged students in regular programs are held to be expenditures for extra or supplemental services, whereas the entire costs of separate programs for such students are considered excess costs, provided that the average statewide expenditure per student for handicapped or disadvantaged students equals or exceeds the average per student expenditure for all other students. Since excess costs in separate programs are much easier to account for and the levels of reimbursement are much higher than those for mainstreamed programs, the regulations are an incentive to use Vocational Education Act funds for separate programs.

Overcoming Sex Bias and Sex Stereotyping

Overcoming sex bias and stereotyping in vocational education is a new objective of Federal policy introduced with the 1976 legislation. A number of provisions encourage the States to achieve this objective, but only two of them are mandatory. States are by and large failing to take advantage of the availability of Federal funds for this purpose. Three major findings emerge from investigating the consequences of this aspect of the legislation:

(1) All States have appointed a sex equity coordinator, but the States show considerable variation in the ways in which the mandated functions of this position are carried out.

> Coordinators are, for the most part, performing the mandated functions. Yet, "consciousness raising" activities for State and local administrators and teachers are the most prevalent. In some States, the mandatory $50,000 expenditure to support these functions allows for considerable program development, but in States with relatively large populations or many school districts, it is sorely inadequate.

(2) Few States spend a significant proportion of their Federal or State and local funds on sex equity-related activities.

> Most States met the requirement to spend an unspecified amount of Federal funds on programs for displaced homemakers, but almost three-fifths of all Vocational Education Act outlays for this activity were accounted for by only 5 States. The other 2 provisions authorizing the use of Basic Grant Federal funds for sex equity-related activities--support services for women seeking to enter nontraditional programs and day care--are permissive, and expenditures for these purposes are also very low. Together, the 3 provisions account for less than 1 percent of Federal Subpart 2 funds and about 0.2 percent of State and local matching funds, with the majority of these expenditures concentrated in only a few States. Expenditures of Program Improvement and Supportive Services funds to promote sex equity were similarly accounted for by a few States. Only 6 were responsible for four-fifths of total expenditures, which came to 2.0 percent of Federal Subpart 3 funds and 0.1 percent of State and local funds. Half of the States did not spend any Subpart 3 funds for this purpose.

(3) Sex stereotyping is still pervasive in vocational education, but is less severe than in the early 1970s.

Female participation rates in selected, occupationally specific programs indicate that women are somewhat less heavily concentrated in programs traditional to their sex. For example, the proportion of females enrolled in technical programs, which have been predominantly male, rose from 9.7 percent in 1972 to 17.5 percent in 1979. The proportions of men enrolled in consumer and homemaking education and occupational home economics programs, where women have traditionally predominated, increased, indicating that these programs have become slightly less sex stereotyped. Although there has been some progress made toward sex equity in vocational education, women's participation in programs that are nontraditional for their sex remains markedly low.

Improving Planning

The planning provisions of the 1976 legislation require States to install a process designed to result in comprehensive and coordinated planning attuned to changing labor market conditions and resulting in streamlined planning documents. Increased emphasis on planning was a key feature of the 1976 legislation. The intention of Congress was to use planning both to facilitate the attainment of national objectives and to provide a rationale for the distribution of funds. Although the planning provisions have had some positive effects, the major findings of the NIE investigations indicate that their full intentions remain to be realized.

(1) A State planning body, generally called the State Plan Committee, is a necessary, but not a sufficient, condition for more coordinated and comprehensive planning for the use of all resources.

The State Plan Committee, consisting of representatives from ten specified fields, agencies, and institutions, provides a setting in which the major providers of and interests in public vocational education and training can present information, points of view, and claims to Federal funds. The required process establishes a vehicle for broad participation in planning decisions. Nevertheless, it appears that in most States the development of the plans is still carried out by the division of the State department of education responsible for vocational, technical, or occupational education.

The State Plan Committee was also intended to provide a setting in which the vocational education and training needs of the State could be considered in the light of all pertinent resources. The aim was to plan for coordinated efforts to meet such needs that would also reduce program overlap and duplication. This intention has not been achieved. For the most part, State Plan Committees generally consider only the uses of Federal Vocational Education Act funds, and there is little coordinated planning for the use of all resources.

(2) Occupational demand data are being produced and displayed in plans, but are of questionable utility for local program decisions.

Occupational demand and supply data presented in the State plans are improvements over what had been available earlier. Contributing to this has been the work of the National Occupational Information Coordinating Committee and the accompanying State Occupational Information Coordinating Committees established by the 1976 legislation. These data, however, have limited value, if any, for local program decision making. The projected State level demand data are not sufficiently reliable at the local school district level where other local sources of information would be needed for annual programmatic decisions.

(3) Although State planning has improved, States still prepare plans that are primarily compliance documents and do not reflect the operational planning that many of them in fact do.

State vocational education officials believe that the primary purpose served by the State plans is to demonstrate compliance with Federal legislation. They are prepared with that objective in mind, since their Federal grants depend upon approvals of their plans. The plans contain the required elements--labor market demand and supply data, information on goals, programs, enrollments, and the like. In many plans, statistical tables satisfying information requirements appear separately, unconnected to other components. The State plans, however, generally are not documents that attempt to integrate the short- and longer-term goals they set forth and to chart the routes by which they are to be attained. Many observers report that the planning capability at the

State level is greater than the documents indicate. The States recognize the value of good planning and do a substantial amount of it. However, for most States, systematic planning and the production of acceptable plans are two different processes.

(4) State plans apparently do not significantly influence local program decisions.

Programming is largely a local prerogative, and the States appear to exert little influence upon eligible recipients applying for Federal funds. Most Federal and State funds are not allocated on the basis of local program planning applications. Decisions on which programs to offer or discontinue (and information on the availability of programs at neighboring institutions which would influence such decisions) are made at the local level, where there is knowledge about the availability of resources and about the local school board. For the most part local planning tends to be weak, and the enforceable planning requirements are aimed at the States, which in most instances generally cannot even pretend to control local decisions on programs.

(5) Coordination in planning is taking place at the State level, involving representatives of Vocational Education Act and Comprehensive Employment and Training Act programs, but it has little effect upon program decision making at the local level.

The participation of representatives from the State Employment and Training Council and from the State Advisory Council on Vocational Education in the State planning process increases interaction at the State level among CETA and vocational education personnel. It does not, however, lead to significantly improved local planning for the coordination of resources to develop programs. CETA and Vocational Education Act programs have different funding sources and cycles and different monitoring procedures and information systems. State and local administrators do not always know fully about the resources available to them at the time they are developing their plans. Nor do State education agencies always know about how much CETA money flows from prime sponsors to local vocational education institutions and programs. Consequently, planning for the coordinated use of all resources for occupational education and training is constrained.

Extending and Improving Programs

Encouraging change and improvement in the Nation's vocational education enterprise is a key purpose of Federal policy, but the Vocational Education Act lacks effective provisions for achieving this objective. The law intends Basic Grant funds to be used preferentially to extend and improve programs rather than to maintain them. States are explicitly required to give priority in approving applications for Federal funds to eligible recipients that propose new programs for new and emerging occupations. But no other funds distribution and few application requirements serve to advance the objective of improvement and extension. There are also unresolved problems that frustrate any accounting of expenditures according to these categories. It is not always clear what constitutes improvement and what is purely maintenance, and it is usually not known whether a given expenditure draws on Federal or nonFederal funds. Therefore it is difficult to determine exactly what States and localities are doing to fulfill the Federal purpose of promoting change in the vocational education enterprise. Nevertheless, there are major findings on this score which emerge from the National Institute of Education investigations.

(1) Only a small proportion of all funds spent at the local level go for program improvement purposes.

> Most funds are reported primarily as expenditures for maintaining vocational education programs. Even though the declaration of purpose clearly prefers Federal funds be used for improvement or expansion at the local level, expenditures of Federal funds cannot be distinguished from expenditures of State and local funds. Based on the uses of all funds reported by administrators, however, it appears unlikely that Vocational Education Act funds are being used as desired.

(2) More than 90 percent of Basic Grant Federal funds are spent on vocational education programs or administration.

Some of the Federal funds spent on program support may be used for improvement, but it is impossible to know how much. States do keep account and are asked to report how much is spent on the various services and activities authorized under Subpart 2, some of which were specifically introduced to stimulate change, e.g., those concerned with sex equity. Expenditures for individual activities are low and tend to be highly concentrated in a small number of States. Flexibility in the legislation has allowed States to fund activities that reflect their own priorities. In only a few States and for a few activities do these accord with Federal priorities.

(3) Less than one-half of all reported Program Improvement and Supportive Services funds are spent for program improvement purposes.

About half of the reported expenditures of Federal funds for activities and services authorized under Subpart 3 are aimed at improvement. The largest single expenditure of these funds, about one-third is for guidance and counseling services, which should not be counted as program improvement. An appreciable fraction goes for administration. The objective of improvement is presumably attained through such activities as curriculum development, pre- and inservice training of teachers, and research. The State and local match for program improvement activities is far lower than that for supportive services. Thus, Federal Subpart 3 funds are more highly directed toward program improvement than are State dollars.

(4) The requirement to give priority to applicants proposing new programs for new and emerging occupations has not operated as intended.

This factor is unique in that it seeks to further a particular program change. The instructions to the States on how to incorporate the factor into their procedures, however, have been vague. Some States reserve a pool of Federal funds specifically for applicants proposing new programs for new and emerging industries; other States have included it as a factor in their formula. The requirements are so loose that States can diminish the effect of the factor by either limiting the size of the pool of funds or the weight assigned the factor in a formula.

(5) There are incompatibilities between the objectives of program improvement and extension and other objectives of the Vocational Education Act.

Most funds under the Act are distributed to applicants on the basis of factors that represent level of fiscal capacity. If the purpose is to enable poorer districts to maintain programs of the same quality as those offered in wealthier districts, the poorer districts should not be expected to spend an appreciable portion of their Federal funds year after year on program improvement projects. Similarly, if Federal dollars are to be used to provide programs and services for students with special needs, it is unlikely that they would be deployed to improve and extend services. Equalization and special needs purposes, therefore, are likely to be at odds with improvement and extension aims.

(6) The provisions for federally funded Consumer and Homemaking Education programs encourage, but do not require, improvement and extension.

Federal funds are earmarked for Consumer and Homemaking Education programs. Curriculum subjects not always included in the past in home economics programs are emphasized in Subpart 5 of the Vocational Education Act, although the provisions still permit supporting traditional subject matter programs with Federal funds. The responsiveness of the States to the objectives promoted by the Federal legislation has been varied. Some States use their Federal funds to support proposals that address the priorities stressed in Subpart 5, which gives them some control over the way these funds are used. However, most distribute funds by formula as an entitlement. In many States, program improvement and extension have been most evident in the outreach programs offered for adults, many of which are dependent on Federal funds. Ancillary services supported with Federal funds also contribute to program improvement.

Strengthening Evaluations

The 1976 amendments introduced requirements for strengthening State evaluations of vocational education programs in order to contribute to improving programs and their correspondence to labor market demands. The concern of the 1976 legislation with employment related outcomes was well founded. There had been reason to believe that some vocational education programming had ignored labor market demand and supply relationships and that the knowledge and skills taught were not up-to-date. The statutory evaluation requirements sought to correct for such deficiencies in several ways, including providing data on placements and employer assessments. Each State is directed to evaluate the effectiveness of each program assisted during the life of its five-year Plan and may use Federal funds for that purpose. In the case of students completing entry-level programs, the criteria for assessment are student employment in occupations related to training and employer judgment on whether the students are well-trained and prepared for employment. These criteria were intended to provide information that would help bring programs into line with labor market occupational demands. Three major findings emerged from the research conducted by the National Institute of Education on the new evaluation requirements.

(1) The 1976 evaluation provisions significantly stimulated evaluation activities on the part of the States and localities.

> Federal legislation helped bring about a heightened appreciation of the usefulness of systematic evaluations for program planning and improvement. It contributed to enhancing both State and local capabilities for conducting evaluations, the first far more than the latter. As with other technical capabilities, marked variations among the States exist.

(2) The statutory evaluation requirements using the criteria of student placement and employer judgments on training and preparation for employment are not generally useful for improving programs.

> These criteria have led to the generation and collection of data of dubious validity and reliability which do not for the most part

> provide the kind of information needed to improve programs or to decide on program offerings in line with changing labor market conditions. Placement rates alone do not indicate either the nature of the problem with the program or its remedy. A low placement rate for graduates from a given program might mean that the program is irrelevant to the labor market, or relevant to the labor market but preparing students poorly, that its students were disadvantaged and hard to employ, or that it was offered in labor market areas with high unemployment.

(3) The best promise of securing results likely to be useful for improving programs and decision making on program offerings is to evaluate the ways programs are planned and operated.

> Outcome data indicate at best that a problem exists; they do not indicate what might be done to bring about improvement. Such data can contribute little, if anything, to improving programs. Program improvement requires information on the planning of programs, their content, the curricula, teaching methods, qualifications of teachers, their equipment and facilities, and all the other factors that affect their operation and their relevance to labor market conditions.

IV

Determining the effects of vocational education on participants is a difficult task. The results of research provide only a partial view of economic outcomes for individuals and of the effects of their vocational educational experiences on those outcomes.

The available evidence indicates that females who graduate from high school business and office programs--the majority of females in occupationally specific secondary vocational education programs--have higher earnings, greater likelihood of employment in clerical jobs, and higher occupational status than female graduates of the secondary general curriculum. Differences with respect to economic outcomes for male secondary vocational and general curriculum graduates who have no postsecondary education are not as strong as those for females. One year after graduation, about half the male graduates of trade and industry programs are employed in jobs related to their training. Variations in labor force participation rates, unemployment rates, and job satisfaction between male graduates of the general and vocational curricula, both without postsecondary education, tend to be small and inconsistent. Differences in outcomes between whites and blacks and between males and females are often much larger than differences associated with the two high school curricula.

Information on postsecondary students, which is limited to the reanalysis of one national survey, shows that 45 percent of both the secondary vocational education graduates and the general curriculum graduates in the sample pursued nonbaccalaureate postsecondary education within 4 years after graduation. Of the secondary vocational and general curriculum graduates in postsecondary vocational programs, approximately half the graduates of each curricular group reported that they obtained either a certificate, license, or 2-year degree within 4 years of high school graduation.

High school graduates who pursue postsecondary education below the baccalaureate level do better on a variety of measures of gainful employment than those who do not. However, for the one national sample studied, differences in gainful employment outcomes between students in nonbaccalaureate postsecondary vocational and academic programs are slight. They are not substantial enough to warrant the conclusion that the advantage of postsecondary nonbaccalaurate education is any greater for students who pursue a vocational curriculum than for those in an academic curriculum.

The research on outcomes in gainful employment was limited to what could be learned from available national survey data on students. More important, it was further limited by the difficulty of attributing the subsequent attainments of students to particular educational experiences. Where no different effects were found, it could mean that there were actually no differences, but it could also mean that differences in outcomes were not large enough to be significant. The results of this research are not assessments of the effectiveness of either secondary or postsecondary vocational education programs.

V

Options for Change

Federal vocational education policy has two overriding and interrelated national goals--one economic and the other social. The economic goal is to improve the skills of the labor force and to prepare individuals for job opportunities. Federal assistance to the States to attain this goal takes the form of encouraging vocational eduction programs for new and emerging occupations, improvements in their quality, the training and retraining of adults, and coordinated program planning in line with labor market demands. The social goal is to provide more equal opportunities for all persons in vocational education. To achieve this goal, the Federal Government helps the States to equalize the capacity of local districts to provide programs of high quality, to overcome sex bias and sex stereotyping in vocational education, and to provide programs and services for populations with special needs. Continuing efforts to find more effective means to realize these goals have constituted an agenda for change in the character of the vocational education enterprise since the adoption of the Vocational Education Act of 1963.

The findings of the National Institute of Education Study of Federal vocational education policy support three broad conclusions:

- the Vocational Education Act of 1963, as amended, attempts to accomplish too much with too few resources

- there are sometimes mismatches between the ends of Federal policy and the means relied upon to realize them
- realizing the ends of Federal policy depends heavily upon State and local policies, practices, and resources

Too Much with Too Little. Federal legislation seeks to assist equalizing the resource base of needy districts, to fund new programs, to extend and improve programs, and to direct funds to serve special needs populations. These objectives can be advanced by Federal policy. The problem is that resources available under the Vocational Education Act are insufficient to help States realize all of them.

End and Means Mismatches. Ends are sometimes announced unaccompanied by specific means for reaching them, as in the case of the end of overcoming sex bias and sex stereotyping and of program improvement and extension. Sometimes, a single instrument is relied upon to fulfill several goals, as in the case of the funds distribution procedures, which are expected both to provide resources to meet the needs for new and emerging occupational programs and to equalize resources for quality programs in poor areas.

State and Local Policies, Practices, and Resources. Realizing some ends of Federal policy is acutely dependent upon what the States and localities are willing and able to do. In the absence of shared objectives and the deployment of State and local resources to help reach them, Federal legislation alone can do little. Acting through the States, Federal legislation can exert only relatively slight influence in local decisions on program offerings. The governance and operation of vocational education programs are responsibilities of the States and localities.

In the light of these broad conclusions, some suggestions may be made about approaches to future legislation under certain constraining assumptions.

Assuming that the Primary Goal of Federal Policy is to Equalize the Capacity of Local School Districts to Provide Vocational Education Programs. . . .

To achieve the objective of increasing the resource base of districts least able to provide a wide range of high quality programs and improve and expand their programs, Federal funds would have to be directed toward districts of low financial ability by a method that is explicit, recipient-specific, and systematic. This would require using a formula that specifies all of the factors by which funds are distributed, does not allow States to add factors, and specifies how they are to be scaled. The measures used would have to be available by school districts in all States and representative of local financial ability and need. The goal of equalizing capacity would be achieved with such a distribution method without placing further restrictions on the use of Federal funds. Additional requirements for the uses of Federal funds would impair the equalization function. They would diminish the ability of poor districts simply to provide good, basic vocational education programs. Under such an approach, the State Education Agency would be required to assure that Federal funds are distributed by a specified method and that it would be evaluated in terms of results--that is, the degree to which equalization is achieved.

Raising the capacity of the poorest districts to a specific level, such as the national median, solely with Federal dollars would require appropriations larger than those of recent years. The amount needed would depend on the level to which capacity is to be raised and the extent to which other funds serve equalizing aims in the State.

Consequently, the effectiveness and the costs of this approach would also be functions of how States distribute their funds.

Equality of opportunity objectives for special needs students could be incorporated in this approach without weakening the equalization goal by recognizing and adjusting for the higher costs incurred in meeting the needs of targeted populations. Special needs students could be given more weight in a distribution formula than others, and thus promote their enrollment in vocational education programs.

Assuming that the Primary Intention of Federal Policy is to Extend and Improve Programs. . . .

If the goal were to prepare a well-trained labor force, the approach to take would be to distribute Federal funds within States on the basis of proposals which describe how the funds are to be spent and why. Planning at the State level, then, would involve planning for the use of Federal funds so that they most effectively further the goal of improving and extending programs. Local planning would have a heavy responsibility in making possible the development of proposals describing current and projected labor market demands, justifying the need for new programs or program improvements in their light, and showing in detail the budget requirements for meeting the needs. Evaluation would primarily determine the extent to which improvement occurs and is effective. This approach could also further greater equality of opportunity by giving priority to proposals also emphasizing programs and services for students with special needs or the reduction of sex discrimination and stereotyping. The State role would consist in assuring appropriate evaluations of the proposals and assure the support of improvement efforts through research, curriculum development, exemplary programs, training, and the like.

Assuming that the Primary Intention of Federal policy is to Serve Those with Special Needs . . .

Realizing this objective would require that Federal funds and Federal planning and evaluation requirements be focused on students with special needs. Federal funds would be distributed within the States to applicants on the basis of how many students are to be enrolled in vocational programs and of proposals describing how the funds are to be spent. A simple distribution formula would require explicit definitions for identifying the categories of students with special needs and counts of those with special needs to be served. A more complex formula would also take into account the different educational and training costs for the different groups of special needs students. The planning process would be required to show not only how these students would be served but also what kinds of services would be made available to help them find employment. The evaluations required would emphasize such criteria as the number of completers and placement in jobs.

These illustrative suggestions concerning the central thrust of Federal policy under three different assumptions emphasize one key point. That is that alternative views of the primary ends of Federal policy carry with them the adoption of different sets of means and requirements for State behavior and imply differences in the scale of Federal resources needed to assist the States in realizing Federal goals.

CHAPTER I. THE VOCATIONAL EDUCATION ACT: ENDS AND MEANS

The Education Amendments of 1976, P.L. 94-482, constitute the second major revision of the Vocational Education Act of 1963. Like their predecessor, the Amendments of 1968, they sought to continue the reform and redirection of the vocational education enterprise initiated in 1963, so that the goals of Federal policy might be realized more fully. The amending legislation adopted in 1976 is complex and detailed. It is, moreover, prescriptive in the processes and procedures it requires, but also permissive in the broad discretion it allows the States in deciding upon the uses to which they may put the Federal grants-in-aid it authorizes. It is, in addition, ambiguous in some respects, and uncertainty has marked its implementation. Finally, it seeks to realize a variety of goals, both ultimate and intermediate.

The Goal Structure: The Ends

The Declaration of Purpose of the Vocational Education Act declares that it is Federal policy to help States improve "planning in the use of all resources available to them for vocational education and manpower training" and to provide "grants to States to assist them" in a variety of ways,

> so that persons of all ages, in all communities of the State, those in high school, those who have completed or discontinued their formal education and are preparing to enter the labor market, those who have already entered the labor market, but need to upgrade their skills or learn new ones, those with special educational handicaps, and those in postsecondary schools, will have ready access to vocational training or retraining which is of high quality, which is realistic in the light of actual or anticipated opportunities for gainful employment, and which is suited to their needs, interests, and ability to benefit from such training (Sec. 101).

This Declaration of Purpose enunciates ambitious and intertwined social and economic goals. The social goal expresses the aspiration for equality of educational opportunity for everyone, regardless of age, location, condition, or ability. This is the meaning of Federal assistance to help the States bring about "ready access to vocational training or retraining which is of high quality. . . ." The economic goal is a trained labor force. This is to be achieved by providing individuals with educational opportunities for the acquisition and development of occupational knowledge and skills, up to the first baccalaureate degree level, that meet the demands of the labor market. This is the meaning of "vocational training and retraining . . . which is realistic in the light of actual or anticipated opportunities for gainful employment. . . ."

The realization of these goals depends upon what the States and localities, which are responsible for operating vocational education programs, can achieve with their own and Federal resources. For the grant of Federal assistance funds, on the basis of the approved State plan, the VEA exacts, so to speak, a price--that the States implement certain processes, procedures, and programs. These processes, procedures, and programs are a means for achieving the long-term goals of Federal policy. They are instrumental. But they also, in themselves, constitute intermediate goals or purposes of Federal policy and affect critically the uses to which Federal funds are put. As expressed in the Declaration of Purpose, in addition to the objective of "improving planning," they are:

> (1) to extend, improve and, where necessary, maintain existing programs for vocational education,
> (2) to develop new programs of vocational education,
> (3) to develop and carry out such programs of vocational education within each State so as to overcome sex discrimination and sex stereotyping in vocational education programs (including programs of homemaking), and thereby furnish equal educational opportunities in voca-

> tional education to persons of both sexes, and
> (4) to provide part-time employment for youths who need the earnings from such employment to continue their vocational training on a full-time basis. . . .

Consequently, to understand how the VEA works, it is essential to understand the interplay among three factors: (1) the overriding, ultimate goals of Federal policy to be achieved by assisting the States; (2) the legislated means for realizing those goals, which in themselves constitute intermediate purposes; and (3) the scale of the Federal resources made available to the States to assist them in accomplishing not only these ends but also still other objectives.

When the reauthorization of the VEA was under consideration in 1976, both the purposes and the provisions of the legislation were subjects of debate. Information on the vocational education enterprise and on how it had been affected by Federal policy, gathered through Congressional hearings held in different parts of the country, shaped that debate. So, too, did the findings of visits to States by staff members of the House of Representatives Committee on Education and Labor and the Senate Committee on Labor and Public Welfare. One Senate committee staff member recalls that she concluded from the staff visits that the Declaration of Purpose "in the existing law [the Amendments of 1968 (P.L. 90-576)] was broad enough to cover anything the State Director wanted to do with his Federal money." When questioned about using Federal funds for maintaining existing programs rather than other purposes, State directors pointed to the Declaration of Purpose, which declared that one objective of Federal assistance was "to maintain, extend, and improve existing programs." They held, moreover, that since maintaining programs came first in the listing, this purpose had priority. When questioned about the flow of Federal funds to wealthy suburban districts, rather than poor inner-city areas, State directors asserted that this was justified by the statement in the Declaration of Purpose that Federal grants were to be used to assist the States in providing ready access to vocational education to "all persons of all ages in all communities."[1] The visits to the States also persuaded Congressional staff that comprehensive statewide planning, another objective of the legislation, was sorely lacking. These deficiencies, as well as others, were identified in two reports which helped shape thinking about the provisions of the 1976 amendments. These were the U.S. General Accounting Office study, What is the Role of Federal Assistance for Vocational Education? (1974) and D. N. Drewes and Douglas S. Katz, Manpower Data and Vocational Education: A National Study of Availability and Use (1975).

When the amending legislation of 1976 was drafted in the Senate, an effort was made to correct these deficiencies by recasting the language setting forth the purposes of the VEA. First, primary emphasis was placed upon improved State planning in the use of all resources as a means for fulfilling Federal goals. Thus, the proposed draft for the Senate bill called for planning for "vocational education policy and programs" that would involve "a wide range of individuals and agencies concerned with education and training within the State," so as "to achieve an equitable distribution of funds among secondary, postsecondary and adult vocational education programs. . . ."[2] Second, the idea of universality expressed in the words "persons of all ages in all communities" was modified by dropping "in all communities," implying that all communities did not have equal claims to Federal assistance, but retaining the idea that "individuals of all ages" were to have "ready access to vocational training or retraining . . . of high quality. . . ." Finally, the proposed draft sought to diminish, if not prevent, the use of Federal grants to maintain programs by stating that they were designed to assist States "to extend, improve, and, where necessary, maintain existing programs. . . ." Placing maintenance third and qualifying it with the notion of necessity would, it was thought, give the desired weight to the purposes of extension and improvement.

Members of the vocational education community opposed these proposed changes in the purposes of the VEA.[3] In the debate within the Senate Committee over the language of the bill to be reported out, compromises were struck in which changes in the Declaration of Purpose, which some Committee members viewed as largely symbolic, were traded for changes in the provisions. The result was that improved planning was given prominence in the Declaration of Purpose and in key provisions; the concept of "persons of all ages in all communities" was retained; the idea of "equitable distribution" of Federal funds was dropped; maintaining existing programs was deemphasized by being listed third and by adding the qualifier "where necessary;" and Federal assistance for offering "new programs" was added. The announcement of a wholly new purpose was the pledge of Federal assistance to the States in order "to overcome sex discrimination and sex stereotyping in vocational education programs. . . ."

In the report accompanying its bill (S. 2657), the Senate Committee declared that even though the Declaration of Purpose spoke of "persons of all ages in all communities," the intention of the Federal legislation was to provide assistance to individuals and areas most in need.

> Given the limited amount of Federal assistance available, it is the Committee's intent that scarce dollars will be first devoted to those with greatest needs. Certainly the phrase "of all ages in all communities" is not intended to imply any per capita distribution of Federal funds throughout a State.[4]

Compared to that of the Amendments of 1968, the 1976 Declaration of Purpose was not significantly revised. The important changes in the 1976 legislation lie in the provisions which, in effect, define the objectives and priorities of Federal policy. Consequently, to understand what the Amendments of 1976 hoped to accomplish, it is necessary to examine systematically the structure and substance of the legislation.

Structure of the Vocational Education Act

The Vocational Education Act of 1963, as amended (P.L. 94-482), has three main parts, the first two of which have subparts. The third, Part C, consists of "Definitions." A glance at Parts A and B and their subparts, together with the amount of dollars appropriated for each for fiscal year 1980, provides an immediate clue to Federal objectives and priorities.

Part A - State Vocational Education Programs	$762,080,000 (total)
Subpart 1 - General Provisions	$ 11,500,000
Subpart 2 - Basic Grant	562,266,000
Subpart 3 - Program Improvement and Supportive Services	124,817,000
Subpart 4 - Special Programs for the Disadvantaged	20,000,000
Subpart 5 - Consumer and Homemaking Education	43,497,000
Part B - National Programs	$ 14,800,000 (total)
Subpart 1 - General Provisions	-0-
Subpart 2 - Programs of National Significance	10,000,000
Subpart 3 - Bilingual Vocational Training	4,800,000
Subpart 4 - Emergency Assistance for Remodeling and Renovation of Vocational Facilities	-0-

Part A funds are distributed first to the States, which have broad discretion with respect to their subsequent distribution to local education agencies (LEAs) and other eligible recipients for each of the five subparts. In contrast, Part B monies support activities conducted at the Federal level.

Subpart 1 of Part B, General Provisions, describes (1) the organization, staffing, and responsibilities of the agency that administers provisions of the VEA; (2) a new national data collection system, the Vocational Education Data System (VEDS); and (3) the composition and responsibilities of the National Advisory Council on Vocational Education. Subpart 2 of Part B, Programs of National Significance, provides for support of a national center for research in vocational education, for the establishment of a Coordinating Committee for Research in Vocational Education, and for programs for training and developing vocational education personnel. Subpart 3, Bilingual Vocational Training, authorizes bilingual vocational education programs and services such as guidance and counseling, preservice and inservice training, and curriculum development. Funds have never been appropriated for Subpart 4, Emergency Assistance for Remodeling and Renovation of Vocational Facilities, which was designed to assist LEAs in urban and rural areas to provide needed vocational programs which they could not offer with available State and local resources.

Part A, State Vocational Education Programs, is, however, the dominant portion of the Vocational Education Act, accounting for 98 percent of the VEA's appropriated funds. It is primarily through this part of the legislation that the goals and instruments of Federal legislation are to be carried out.

The Policy Instruments: The Means

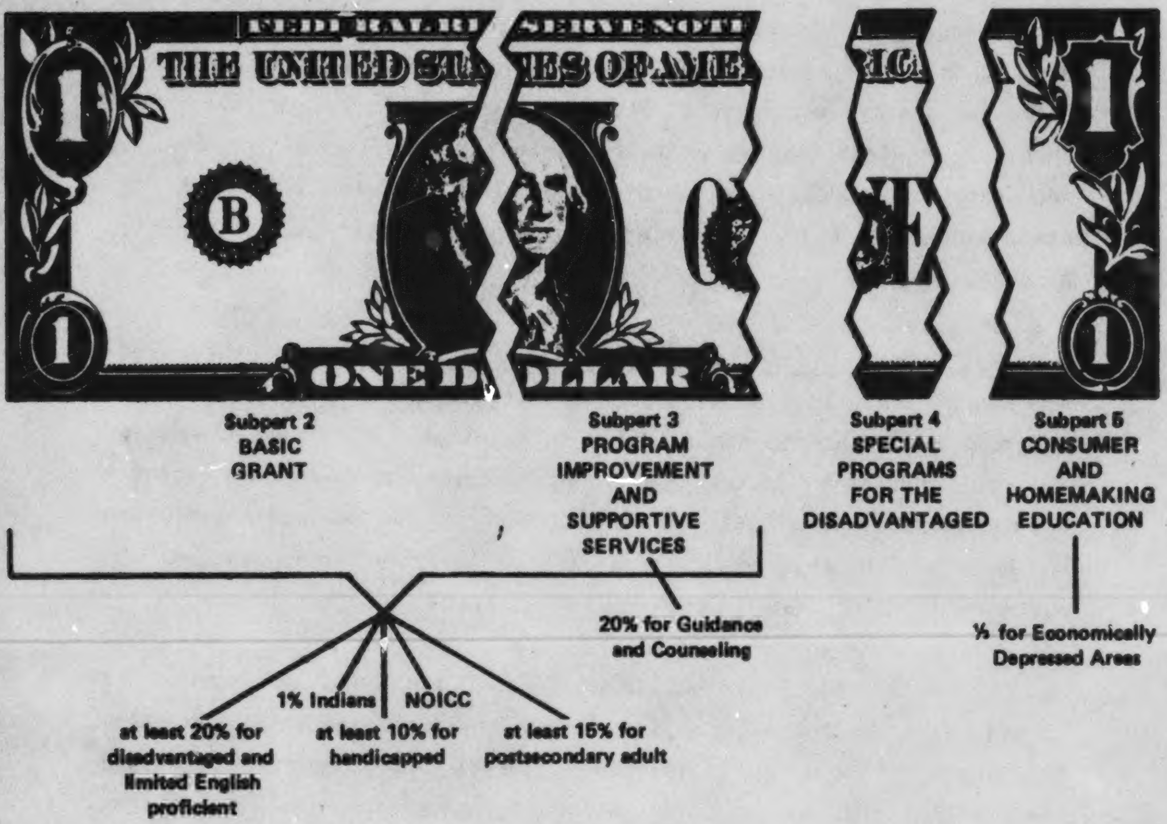
Federal Part A funds are allotted to the States in three lump sums: one for Subparts 2 and 3 combined; one for Subpart 4; and one for Subpart 5. The States, in turn, distribute funds for purposes authorized under each of the subparts to local educational agencies and other eligible recipients. Subpart 1, General Provisions, sets forth most of the controls placed upon the States' actions with respect to the funds. There are requirements for the distribution of funds; for the appointment of sex equity coordinators; for planning, evaluation, and accountability; for using funds for vocational programs for American Indians; and for institutionalizing improved occupational information systems. In addition, there are requirements to set aside portions of Subparts 2 and 3 funds for three uses: 20 percent for disadvantaged and limited English-speaking persons, 10 percent for handicapped persons, and 15 percent for persons in postsecondary and adult programs. The titles of the four subparts which follow the General Provisions, as well as the three set asides, represent Federal priorities on which Federal funds are to be spent. The titles, of course, designate different objects: in one case it is a program (consumer and homemaking education), in a second, a target group (disadvantaged), in a third, a group of activities (program improvement and supportive services), and in a fourth, an educational level (postsecondary). The fifth (basic grant) covers numerous programs and services on which Federal funds may be spent. In setting up these subparts and set asides, the legislation circumscribes the use of funds so as to serve important purposes. Yet, as will be seen in the discussion of each subpart, the Act is also permissive with respect to the ways in which funds may be used once they reach eligible recipients--so permissive that Subparts 2, 3, and 5 may be thought of as mini-block grants. A graphic representation of the set aside and subpart provisions of Parts A and B of the legislation appears in Figure I-1.

Subpart 1 - General Provisions

In addition to setting forth the procedure for distributing Federal funds to the States and then the requirements for their distribution within the States and for State and local matching of Federal

MANDATED USES OF FUNDS UNDER THE VOCATIONAL EDUCATION ACT

Part A: STATE VOCATIONAL EDUCATION PROGRAMS



Subpart 2
BASIC
GRANT

Subpart 3
PROGRAM
IMPROVEMENT
AND
SUPPORTIVE
SERVICES

Subpart 4
SPECIAL
PROGRAMS
FOR THE
DISADVANTAGED

Subpart 5
CONSUMER
AND
HOMEMAKING
EDUCATION

20% for Guidance
and Counseling

⅓ for Economically
Depressed Areas

1% Indians

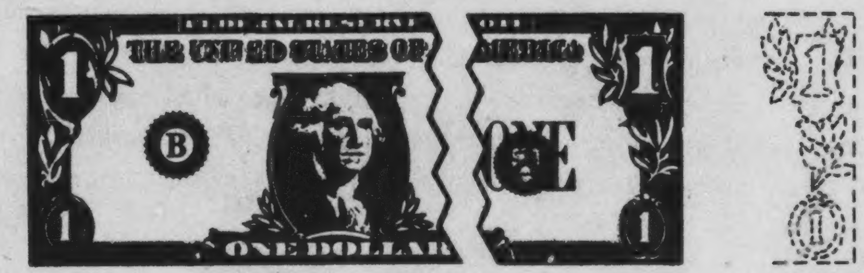
NOICC

at least 20% for
disadvantaged and
limited English
proficient

at least 10% for
handicapped

at least 15% for
postsecondary adult

Part B: NATIONAL PROGRAMS



Subpart 2
PROGRAMS OF
NATIONAL
SIGNIFICANCE

Subpart 3
BILINGUAL
VOCATIONAL
TRAINING

Subpart 4
EMERGENCY
ASSISTANCE
FOR REMODELING
AND RENOVATION
OF VOCATIONAL
FACILITIES

dollars, Subpart 1, General Provisions, also describes the requirements for planning, evaluation, and accountability. It specifies the content of the State Plan to be submitted, originally to the U.S. Office of Education and now to the Department of Education, to secure the grant-in-aid and the procedures for producing the Plan. It sets forth the format and content of the application by eligible recipients for Federal funds. It also specifies the criteria by which programs are to be evaluated and the way in which States are to be held accountable. Further, it requires that each State "assign such full-time personnel as necessary" to conduct nine functions in connection with overcoming "sex discrimination and sex stereotyping in vocational education programs. . . ."

Requirements for Allocating and Distributing Federal Funds. Federal funds are allocated to the States on the basis of a formula that has remained unchanged since 1963. This formula, discussed in Chapter II, uses population factors and a relative per capita income factor.[5] Within a State, in almost all cases funds must be matched one-for-one by State and local funds (Sec. 111(a)). Matching funds need not be distributed in the same manner as Federal funds.

The intrastate distribution of Federal funds was the subject of considerable debate in the Congress, and the resulting provisions differ sharply from prior legislation. The Senate Committee expressed concern that a number of States allocated funds among school districts on the basis of a flat distribution,[6] without taking into account relative need or ability to pay. The House Committee found that the requirements of the previous Act were not directive enough to carry out the intention of Congress, which was to provide additional resources to those school districts and agencies most in need of resources with which to provide programs.[7] Between them, both committees amended the 1968 legislation so as to reassert Federal priorities and target Federal funds toward populations with special needs, poor areas which lack the means for providing needed vocational education programs, and programs for new and emerging occupations.[8]

The 1976 legislation requires Federal funds to be distributed intrastate to eligible recipients on the basis of two factors applying to the approval of applications and two factors applying to the distribution of funds among approved applicants. These provisions are discussed in detail in Chapter II. It is sufficient to note here that States are instructed (Sec. 106(5)(A)) to give priority, on the one hand, to applications for Federal funds coming from areas which are economically depressed, have high unemployment rates, and lack the resources to meet their vocational education needs without Federal assistance, and, on the other hand, to applications which propose programs new to the area and that are designed to meet new and emerging manpower needs and job opportunities. States are further instructed (Sec. 106(5)(B)) to distribute Federal funds among approved applicants on the basis of "economic, demographic, and social factors relating to the need for vocational education among the various populations and various areas of the State," except that the two most important factors in the case of LEAs must be (1) their "relative financial ability . . . to provide the resources necessary to meet the need for vocational education in the areas they service" and (2) the "relative number or concentration of low-income families or individuals within" them. States are also instructed to apply not only the relative financial ability consideration in acting on applications for Federal funds from other eligible recipients, but also "the relative number or concentration of students . . . whose education imposes higher than average costs, such as handicapped students, students from low-income families, and students from families in which English is not the dominant language. . . ."

How these provisions affect the distribution of Federal funds is treated in detail in Chapters II and IX. So, too, are the formulas which the States devised for distributing Federal funds as a result of the Federal regulations and the reviews of the State plans, first by the Bureau of Occupational and Adult Education (BOAE) and then, with the establishment of the Department of Education, by the Office of Vocational and Adult Occupation (OVAE). The difficulties associated with using the four factors in State distributional formulas and the problems of interpretation, confusion, and controversy which accompanied the implementation of these provisions of the law were recorded in The Vocational Education Study: The Interim Report.[9]

Two other requirements in the 1976 amendments affecting funding of vocational education programs involve the use of Federal dollars in conjunction with State and local dollars. The latter, of course, account for the bulk of vocational education expenditures. One requirement--the "maintenance of effort" requirement (Sec. 111(b)(1))--is designed to prevent the erosion of a State and local resource base for vocational education. The second is the requirement that Federal funds shall supplement "State and local funds that would in the absence of such Federal funds be made available for the uses specified in the Act, and in no case supplant such State or local funds" (Sec. 106 (a)(6))." The "maintenance of effort" requirement and the prohibition against using Federal dollars to "supplant" State and local dollars are the only controls established by the legislation on the use of State and local dollars. They do serve to prevent State funds from being distributed in such ways as to offset Federal targeting. The Interim Report concluded that supplanting is not being detected because State Plans do not--and are not required to--provide sufficient information on the distribution or use of State and local funds.[10]

The last of the mechanisms pertaining to the use of Federal funds, one which has already been mentioned, is the set aside (Sec. 110): 20 percent for disadvantaged and limited English-speaking, 10 percent for handicapped, and 15 percent for postsecondary and adult programs. Both the House and Senate Committees had reiterated the Federal commitment to assist populations with special needs to which the first two set asides attend.[11] Each committee took note of the findings of the 1974 General Accounting Office study that some States were neither spending the required set-aside amounts of Federal funds nor providing State and local funds sufficient to serve these populations. In some States, such funding declined as Federal funding increased.[12] The 1976 legislation tried to correct these failures by requiring matching of the set asides.

Planning, Evaluation, and Accountability. The requirements for planning, evaluation, and accountability, all procedural in nature, were greatly strengthened in 1976 in response to criticisms voiced at hearings that vocational education programs were frequently irrelevant to local economies, and in response to the GAO finding that most of the enrollment was "concentrated in programs with only a peripheral relationship to labor market needs."[13] Part of the problem, it was asserted, was the lack of information on job skills in demand and on whether or not vocational education students were securing and holding jobs. A second, related problem emphasized during the hearings was that planning was carried out for compliance purposes only. State plans, concluded the Senate Committee, contained "the paperwork necessary to comply with the face of the statute, but did not reflect the planning efforts undertaken by the State. . . ."[14] Finally, the point was made that accountability procedures were lacking for ensuring that Federal funds were spent according to plan. As a result of these several deficiencies, it was concluded that programs were not planned with labor market demand in mind, States were not being held accountable for delivering what they promised in their Plans, and program success was not evaluated in these terms.

The legislation sought to correct these deficiencies in several ways. It created a National Occupational Information Coordinating

Committee (NOICC) at the Federal level with parallel committees in each State to coordinate and systematize occupational demand and supply data which could be used for planning purposes. In addition, the Act greatly tightened the planning provisions by requiring the 5-year and annual plans (Secs. 107(b) and 108(a)) to set out explicitly the planned use of Federal, State, and local vocational education funds to meet labor market demands.[15] The annual plan would serve to update the 5-year plan and, if necessary, show more accurate employment data or a different level of funding than was originally estimated (Sec. 108(b)(1)). The annual accountability report would show how funds were used and what results they achieved in relation to the need for job skills, current and prospective, stipulated in the 5-year plan (Sec. 108(b)(2)). The evaluation requirements of the 1976 amendments, discussed in Chapter IV, make it clear that the success of programs is to be measured in employment terms--whether students are placed in jobs related to their training and whether their employers consider them well-trained and prepared for employment.

Both the House and Senate Committees saw these provisions as interrelated. The Senate Committee observed that "one key element of the comprehensive plan would be the development of procedures for continuous planning and evaluation, including the regular collection of data, to be available to all parties in the State to whom it would be of interest. A solid data base will give a State a basis for program evaluation. Evaluation will, hopefully, lead to improvement in program quality. Both data and evaluation can result in improved planning capability."[16] Improved planning, accountability, evaluation, and information on jobs and occupations, it was believed, would in combination help make the vocational education enterprise more responsive to labor market demands and so further the goal of producing a well-trained labor force.

Other Requirements in the General Provisions. The General

Provisions also contain requirements bearing on State Administration (Sec. 104). One is the requirement that each State must designate an individual to serve as a "sex equity coordinator" and must reserve a minimum of $50,000 for the functions associated with the post. Second are the requirements for the composition and activities of State and Local Advisory Councils on Vocational Education (Sec. 105). In addition, there are requirements for the submission and approval of State Plans, the conditions under which funds may be withheld, and the procedure for judicial review, should a State wish to challenge disapproval of its Plan (Sec. 109).

Subpart 2 - Basic Grant

The Basic Grant is the centerpiece of the Vocational Education Act. Most of the Part A funds--almost 70 percent--go to the States in the form of the basic grant. The Act lists 15 possible uses for the basic grant, ranging from general support for "vocational education programs" to support for particular programs, such as "energy education programs," and including such diverse uses as "work study" and "cooperative education programs," "construction," "teachers' salaries," and special services, such as "day care for children of students" or "placement services."[17]

States have complete discretion in deciding whether or not to use Federal funds for any of the authorized purposes. Furthermore, the authorized uses are so broad (e.g., "vocational education programs") and so numerous that it is difficult to think of educational, training, or related purposes for which Federal funds could be appropriately used that would not be allowed. The regulations add only one restriction on the use of Subpart 2 funds; namely, that some funds must be used for displaced homemakers. It is important to recognize that the Act elsewhere encourages the use of Federal funds for particular purposes, such as extending and improving programs rather than maintaining them, but it does not provide specific mechanisms for realizing these purposes, as is made clear in Chapters III and IX.

Subpart 3 - Program Improvement and Supportive Services

Funds made available under Subpart 3 may be used for research, exemplary and innovative programs, curriculum development, guidance and counseling, preservice and inservice training, grants to overcome sex bias, and certain administrative costs. Activities funded under Program Improvement and Supportive Services are designed to keep the enterprise current and to improve it. For example, they could enable a school to offer a program to meet a new occupational need by providing teacher training and curriculum development opportunities. These funds might be used to conduct research on effective ways of teaching disadvantaged and handicapped students or, indeed, on ways of reducing sex bias. Program improvement and supportive service activities, therefore, may serve to help realize all the goals of Federal policy.

There is only one restriction on the use of Subpart 3 funds; namely, 20 percent must be used for guidance and counseling services. Otherwise, States are free to allocate funds among the uses in any way they choose and may also choose not to spend funds on some authorized uses. Overcoming sex bias was a matter of considerable concern when the legislation was adopted in 1976. Yet, expenditures to achieve this objective are not mandated. As with the basic grant, the pursuit of certain activities or purposes is encouraged, but there are no accompanying mechanisms that direct funds toward them. Thus, with the exception of the requirement to use Federal funds for counseling and guidance, the States are given complete discretion in the use of Subpart 3 funds.

Subpart 4 - Special Programs for the Disadvantaged

Funds under this Subpart are to be allocated by the States to areas "of high concentrations of youth unemployment and school dropouts, and shall be used to pay the full cost of vocational education for disadvantaged persons" (Sec. 140(b)(1)). No restrictions are placed upon the use of these funds, but neither are there directions or even suggestions of a programmatic character. The absence of a matching requirement makes clear the Federal purpose of providing an incentive to selected LEAs to provide programs for the disadvantaged. It will be recalled, however, that in fiscal year 1980 only $20 million were appropriated for Subpart 4.

Subpart 5 - Consumer and Homemaking Education Programs

Consumer and Homemaking Education (C&HE), to which Chapter VI is devoted, is the only program area treated categorically in the 1976 Act. Federal vocational education policy has been concerned with home economics since its inception with the Smith-Hughes Act of 1917, which provided funds for this and three other subject areas.[18] Funds appropriated under this subpart are distributed according to the factors specified in the General Provisions, but there is the additional requirement that one-third must be spent in economically depressed areas, a requirement designed to contribute to the Act's social goals. The Act lays out the preferred content of the field by listing six types of programs which may receive funding, as will be seen in Chapter VI, but does not restrict the uses of the funds to these six. It is similarly permissive in encouraging, but not requiring, the achievement of certain program ends, such as "participation of both males and females to prepare for combining the roles of homemakers and wage earners, . . . elimination of sex stereotyping, . . . outreach programs for youth and adults. . . ."

Resources for Realizing the Goals

The Federal resources actually spent in fiscal year 1979 to assist the States to achieve the many ends of Federal policy came to about $565 million, as Table I-1 shows. It should be noted that the dollar amounts shown expended in this table do not conflict with those given earlier, which are for fiscal year 1980 and which show sums appropriated. In fiscal year 1979, the States and localities reported spending almost $6 billion for vocational education programs, but almost certainly spent more than that since they do not report all vocational education expenditures. Thus, using reported expenditures, only 1 dollar of Federal money was spent for about 10 State and local dollars.

This ratio, however, should not be taken as a reliable measure of either the actual or potential influence that Federal policy can exert upon the vocational education enterprise. The cautionary note is important because it is frequently asserted that Federal dollars are relatively too few to "leverage" the enterprise in the direction of attaining Federal goals. On balance, there is warrant for concluding that, in combination with the means adopted, Federal resources are too small in scale to achieve all of the several ends of Federal policy. This is even true for those few States in which Federal dollars are a significant fraction of total vocational education expenditures, such as West Virginia and South Dakota. At the same time, it must also be said that the expenditures of Federal dollars on certain purposes--that is to say, certain parts of the legislation--are significant enough in relation to combined State and local expenditures to make a difference.

Disaggregating the national expenditure data by subpart and set-aside categories shows great variations in the ratios of State and local to Federal dollars, as Table I-1 shows, from a high of 15 State

TABLE I-1

RATIO OF FEDERAL TO STATE AND LOCAL EXPENDITURES[1] FOR PART A: STATE VOCATIONAL EDUCATION PROGRAMS, FY 1979 (IN THOUSANDS)[2]

Part A:	Federal	State/Local	Ratio Fed:S/L
State Vocational Education Programs	$565,107	$5,910,906	1:10.5
Subpart 2	404,131	5,215,765	1:12.9
Subpart 3	102,694	244,238	1: 2.4
Set Asides Under Subparts 2 and 3			
Disadvantaged	$104,954	$ 312,039	1: 3.0
Handicapped	53,140	121,163	1: 2.3
LES	3,879	17,402	1: 4.5
Postsecondary and Adult	133,090	2,006,417	1:15.1
Subpart 4	17,538	12,230	1: 0.7
Subpart 5	40,741	438,671	1:10.8

1. Expenditures do not include unliquidated obligations.

2. Because of rounding, the total is not additive.

Source: The Vocational Education Data System, 1979

and local dollars for every Federal dollar for expenditure on post-secondary and adult programs to a low of 70 State and local cents for every Federal dollar spent on special programs for the disadvantaged.[19] In general, the degree of the overmatch provides an indicator of State and local priorities, and greater correspondence between Federal and combined State and local expenditures signal Federal priorities not yet fully shared by States and localities nationally.

It should not be surprising that the Federal to State and local ratio is as low as it is for Subpart 2, Basic Grants, for the expenditures are on "vocational education programs" in general, as well as for a range of more specialized objectives. However, substantial State and local overmatches should not automatically be taken to indicate the absence of an influence of a particular Federal priority within the scope of a subpart. Where the overmatch is low, the availability of Federal funds not only establishes an agenda for State and local activities, as in the case of Program Improvement and Supportive Services and programs for disadvantaged and handicapped persons, but also accounts for an appreciable portion of total expenditures.

A SUMMING UP

The preceding sections have characterized Federal vocational education policy as having two overriding goals--one economic and the other social. These, it has been said, are to be achieved through instrumentals--processes, procedures, and programs--which in themselves constitute objectives. They seek to effect changes designed to improve the Nation's vocational education enterprise. The actors making these changes are the States that apply for and receive Federal grants-in-aid and the recipients of Federal funds within the States. The preceding descriptions of the structure and substance of the Vocational Education Act of 1963, as amended, should have also made clear not only its complexity but also its contrasting features of permissiveness and prescriptiveness, which in turn suggest problem areas in the relationships between ends and means.

The Amendments of 1976 became law on October 12th of that year. In a strict sense, they only became fully operational, first, with the enactment of the technical and other amendments of Public Law 95-40, adopted June 3, 1977, and then, with the issuance of the consequent Rules and Regulations by the Office of Education on October 3, 1977. This means that States and localities have been responding to the last series of changes in the VEA for a relatively brief period of time. How key provisions of the 1976 legislation have been implemented and what influences they have exerted up to 1981 are the subject matter of later chapters, particularly II, III, IV, VI, and VIII. Chapter IX presents an overall assessment of the effectiveness of the 1976 legislation in realizing the goals of Federal vocational education policy.

FOOTNOTES

1. Jean S. Frohlicher, "The Education Amendments of 1976: Their Evolution in the Senate; Their Directions for the Future," mimeographed (paper prepared for the National Institute of Education, Vocational Education Study, 1981), p. 28-29.

2. Quoted in Frohlicher, op. cit., p. 29, emphasis added.

3. Ibid., p. 30.

4. U.S. Congress, Senate, Committee on Labor and Public Welfare, *Education Amendments of 1976: Report to Accompany S. 2657*, Senate Report No. 94-882, 94th Cong., 2nd Sess., 1976, p. 57 (hereafter cited as Senate Report).

5. See Chapter II, pp. 5-14. The minimum allotment is $200,000, and no State may receive less than its total fiscal year 1976 allotment.

6. Senate Report, p. 71.

7. U.S. Congress, House, Committee on Education and Labor, *The Vocational Education and National Institute of Education Amendments of 1976: Report to Accompany H.R. 12835*, House Report No. 94-1085, 94th Cong., 2nd Sess., 1976, p. 33 (hereafter cited as House Report).

8. Senate Report, p. 70.

9. Washington, D.C.: U.S. Government Printing Office, 1980, Chapter III.

10. Ibid., p. III-41.

11. House Report, pp. 14-15; *Senate Report*, pp. 76-79.

12. U.S. General Accounting Office, *What is the Role of Federal Assistance for Vocational Education?* Report of the Comptroller General to the Congress (Washington, D.C.: U.S. Government Printing Office, December 1974), p. 16.

13. House Report, p. 20.

14. Senate Report, p. 66.

15. The Education Amendments of 1978 subsequently amended the General Education Provisions Act to require plans for all education programs, including vocational education.

16. Senate Report, p. 68.

17. A larger number of authorized uses can in fact be identified. The 15 uses, listed in the language of the Act (Sec. 120 (b)(1)), are as follows: (1) vocational education programs; (2) work-study programs as described in Section 121; (3) cooperative vocational education programs as described in Section 122; (4) energy education programs as described in Section 123; (5) construction of area vocational education school facilities; (6) support of full time personnel to perform the duties described in Section 104(b); (7) the provision of stipends, subject to the restriction contained in paragraph (2), which shall not exceed reasonable amounts as prescribed by the Commissioner, pursuant to regulations, for students entering or already enrolled in vocational education programs, if those students have acute economic needs which cannot be met under work-study programs; (8) placement services for students who have successfully completed vocational education programs, subject to the restriction contained in paragraph (2); (9) industrial arts programs which such programs will assist in meeting the purposes of this Act; (10) support services for women who enter programs designed to prepare individuals for employment in jobs which have been traditionally limited to men, including counseling as to the nature of such programs and the difficulties which may be encountered by women in such programs, and job development and job follow-up services; (11) day care services for children of students in secondary and postsecondary vocational education programs; (12) vocational education for: (i) persons who had solely been homemakers but who now, because of dissolution of marriage, must seek employment; (ii) persons who are single heads of households and who lack adequate job skills; (iii) persons who are currently homemakers and part-time workers but wish to secure a full-time job; and (iv) women who are now in jobs which have been traditionally considered jobs for females and who wish to seek employment in job areas which have not been traditionally considered jobs for females, and men who are now in jobs which have traditionally been considered job areas for males and who wish to seek employment in job areas which have not been traditionally considered job areas for males; (13) construction and operation of residential vocational schools as described in Section 124; (14) provision of vocational training through arrangements with private vocational training institutions where such private institutions can make a significant contribution to attaining the objectives of the State plan, and can provide substantially equivalent training at a lesser cost, or can provide equipment or services not

available in public institutions; and (15) subject to the provisions of Section 111, the costs of supervision and administration of vocational education programs by eligible recipients, and State administration of the 5-year plan submitted pursuant to Section 107 and of the annual program plan submitted pursuant to Section 108, except that not more than 80 per centum of the amount of payments determined under Section 111 for such purposes shall be made from grants under this subpart.

18. Under the Smith-Hughes Act (P.L. 64-347), Federal funds could be spent for four subject areas: agriculture, industry, trade, and home economics.

19. The matching funds reported for the disadvantaged and handicapped set aside may be artificially low. The matching ratios are often limited by the stringent reporting requirements. Some recipients may report only what is necessary to meet the guidelines or match requirements. Consequently, reported matching requirements are very likely to be conservative.

CHAPTER II. VOCATIONAL EDUCATION FUNDS: ALLOCATION PROVISIONS

Introduction

Vocational education offered in public schools, both secondary and postsecondary, obtains its operating income from Federal, State, and local governments. In the case of Federal funds provided through appropriation acts, the money flows first to the State, then from the State to the local level, and finally to the educational institution. Federal Vocational Education Act funds, for example, are available to the school after being processed by the U.S. Department of Education and by both the State education agency (SEA) and local education agency (LEA). Each has a hand in affecting the ultimate distribution of funds to the schools and each retains part of the allocation for expenditures on administration and supportive services. State funds for vocational education go to the LEA, which allocates them among its schools. Local funds are allocated to schools for vocational education programs by LEAs. Other funds for meeting operating costs are derived from tuition charges and, less commonly, from private sources.

In addition, other Federal funds for operating expenditures reach districts and schools from regional, local, or State sources. CETA funds, for instance, may flow from a prime sponsor either to a LEA or directly to a school. Appalachian Regional Development Act funds may reach a school directly from the Commission.

Each level of government influences school practices by its decisions on the flow and use of funds. Thus, each level acts as a control center for realizing national goals. In one way or another, each level is constrained by the law and the consequent rules and regulations with respect to how it distributes and uses funds.

Issues and Caveats

The funds that are allocated to the States and territories through the Vocational Education Act form the basis for achieving the purposes of the Act. The only means at the disposal of the Federal Government (besides barring discriminatory practices by law) are dependent upon the acceptance of funds by the States and the implicit agreement to distribute and to use the funds in accordance with the Act. Therefore, many of the critical mechanisms in the law have to do with how the Federal dollars are distributed.

The distribution of funds by the Federal Government to the States and territories has been remarkably noncontroversial. Since the procedure is quite explicit, there are no problems of interpretation or implementation. The consequences of each particular formula chosen seem acceptable to those who do not benefit as well as to those who do.

The required distribution of Federal funds by the States has proved difficult to implement. Problems in implementation have been attributed to ambiguity, conflicting purposes within the Act, the inability of the Office of Vocational and Adult Education (OVAE) to interpret and provide adequate guidance to the States, and the limitations of the data. The purpose of this chapter and the next is to examine the consequences of the policies, to go beyond administrative issues to find out what effects policies have on funds available to local districts and institutions and on services available to students. Two frameworks have been selected for examining the distribution and the use of funds and resources.

The first framework, covered in this chapter, is based on the distribution procedures set out in the law. It is appropriate to look at the actual distribution of funds with respect, first, to each of the factors in the law that must influence the distribution of funds and, second, to the procedures used. The factors include median per capita income and population by age groupings for the Federal-to-State formula; for intrastate distribution, they include relative financial ability and concentration of low income families or individuals; in the case of postsecondary institutions, they may include concentration of individuals for whom the costs of education are high, efforts to serve areas that are economically depressed or that have high rates of unemployment and are unable to provide for their own needs, and efforts to serve areas introducing new programs for new and emerging occupations. This discussion will further illuminate the structural analysis of the formulas which was provided in The Interim Report by describing the consequences of the distributional requirements of the law. It will address questions such as:

1. Which States benefit and which do not from the Federal formula?
2. What effect does each of the required intrastate factors have on the actual allocations to recipients?
3. What shifts in distribution have occurred since the implementation of the 1976 law?

The second framework, treated in Chapter III, is based on the mandate. Section 523(b) of the Education Amendments of 1976 asked the NIE to study the distribution of vocational education dollars in terms of "services, occupations, target populations, enrollments, and educational and governmental levels."

The quantitative data presented in this chapter are designed to describe patterns and trends, and should not be used to evaluate the relative performances of individual States. Although the fiscal year 1979 VEDS data are the most carefully collected bits of information on vocational education available to date, they do have certain limitations. A few of the most obvious follow.

(1) The VEDS enrollment figures, while more precise than ever before, still represent students with a wide range of hours of exposure to vocational education instruction. They do not indicate full-time equivalents. It can safely be assumed that students in occupationally specific programs receive more vocational education instruction than students who are not in occupationally specific programs, but exact values cannot be be ascribed to degree of participation. Furthermore, States may use varying criteria for determining who is in an occupational program.

(2) The figures on enrollments of target populations include only those for whom services were purchased with the set-aside funds, not all who were served. Districts may have served handicapped or disadvantaged students but chosen not to apply for the set-aside funds, and thus the students were not "counted."

(3) Due to the stringent reporting requirements, matching State and local funds may, in some instances, be reported only to the level of the law. Therefore, they probably do not reflect the true State and local expenditures. It is doubtful, for example, that States such as West Virginia or Vermont actually match postsecondary and adult expenditures by less than 2 State and local dollars to every Federal dollar. This would indicate an annual total expenditure of less than $50 per student, hardly enough for an adequate education.

The data analyzed by the University of California also have limitations, although they are generally the same limitations that States are faced with when designing formulas. Unemployment rates, for example, are county figures rather than LEA rates except in the large cities. Measures of concentration of low-income families or individuals, such as numbers of students from AFDC families or students eligible for Title I, are proxies, since actual counts by LEA are not available. Measures may vary from State to State. Furthermore, the study of secondary districts was limited to 12 States and the study of postsecondary institutions was limited to 6 States. These were not selected randomly; they include the five "core" States, common to all elements of the study, and others representing less populated States in each region of the country.

The Distribution of VEA Funds to the States

The first distribution point is Federal, where the Department of Education controls the flow of appropriated monies to the States and territories. The requirements in the Vocational Education Act of 1963, as amended, for the distribution of Federal dollars to the States, in contrast to the requirements for distribution by the States, are relatively straightforward. From 1917 until 1963 Federal dollars were allocated to every State according to specific populations, e.g., rural, farm, urban, for the different occupational subjects specified in the law.

Since 1963, the appropriations for individual programs have been consolidated into grants for all vocational education occupational programs. The present Federal formula is based on the age groups in a State's population, rather than on place of residence, and on income factors. The law sets aside small shares of the appropriation for American Indians and the National Occupational Information Coordinating Committee. The remainder is alloted to the States, on the basis of 50 percent according to their populations between the ages of 15 and 19, 20 percent according to their populations between the ages of 20 and 24, 15 percent according to their populations between the ages of 25 and 65, and 15 percent according to their populations between the ages of 15 and 65.

The amounts allotted according to population groups are modified by the median income of each State. This is done by adjusting by a factor--1 minus 0.5 times a ratio which is the per capita income for the State divided by the per capita income for the United States. A condition placed on the factor is that no State can have an adjustment factor of more than 20 percent above or below the national average. In other words, a State whose median income is the same as the national average would be 0.5. A poor State would have a factor greater than 0.5, but no more than 0.6. A wealthy State would have a factor smaller than 0.5, but not less than 0.4. In no case can the allotment for a State be less than its allotment in fiscal year 1976.

The provisions governing the distribution of Federal funds to the States, first adopted by the Vocational Education Act of 1963, represent three major changes from previous legislation. One, the funds appropriated for occupational areas are consolidated into grants that are not designated for particular occupational areas. This change gives the States more flexibility in the use of Federal dollars with respect to occupations, presumably enabling them to be more responsive to labor market demands by deemphasizing traditional programs, such as vocational agriculture and C&HE, and by supporting occupational programs for new and emerging industries. A second major change is the shift from population factors based on place of residence to age groups, with weights assigned to each group so as to indicate the vocational education needs of a State's total population. The weights assume that the youngest age group, 15-19, accounts for slightly more than half of the total need for vocational education. The third change, adjusting by an income factor, compensates in part for a State's lack of fiscal capacity to provide vocational education programs adequate in number and quality.

The Consequences of the Federal Formula

The Federal distribution is far easier to analyze than the States' distributions; funds follow predictable and identifiable patterns. The population factor is relatively weak in its effect on the per capita State allotments, but differences among States do influence the flow of funds. Since the formula favors younger populations, the major effects are due to differences among States that influence the proportion of youth in the State, such as migration patterns and proportion of minority populations. The birth rates of minority populations have been higher than those of nonminority populations in recent years, and therefore States with large minority populations have larger youth populations. Similarly, States with large immigration of young people benefit from the current population formula. The southeastern States and the western States had the largest proportions of youth, according to the 1977 census. The northeastern States had the smallest.

The adjustment factor is much more powerful than the population factor in reassigning the Federal dollars among States and territories. It was introduced in 1963 with the intent of equalizing resources available for vocational education among the States and territories. Despite the limits placed on the factor by the constant, which is set at 0.5, and by the minimum and maximum, which are set at 20 percent below and above the national median, the effect is significant. Median per capita income, the factor used to adjust the allotment, is not only a measure of a State's relative wealth but also indicates its relative cost of living. States with low costs tend to have low wage scales and appear comparatively poorer in terms of median income. Low per capita income, however, may not necessarily reflect fewer or poorer services. Low costs are most closely associated with southern States and rural States and, as would be expected, the adjustment formula does favor those States at the expense of urban, northern States (see Table II-1).

The 10 States with the highest adjustment factors (with one exception) are southern. The 10 States with the lowest adjustment factors are urbanized and/or northern. The high factor States, with the exception of New Mexico, have relatively low costs of living, as reflected by average teachers' salaries in 1978-79. Conversely, the low factor States have high costs of living, judging by average teachers' salaries (see Table II-2). Further, the 10 highest factor States all have larger percentages of rural populations than all the low factor States except Alaska.

The limits of 0.4 and 0.6 on the adjustment factor affected 6 States, the District of Columbia, and all the territories in fiscal year 1978. Alabama, Arkansas, Mississippi, New Mexico, South Carolina, and the territories were limited to a factor of 0.6. At the low end, Alaska and the District of Columbia were limited to 0.4. In addition, three of the territories had their allotments increased to the minimum of $200,000.

It is clear that the Federal formula does not operate, nor is it intended to operate, as an incentive to increase the States' investment in vocational education. The States and territories receive their allotments regardless of how many students are enrolled and regardless of what effort they themselves make to support and improve vocational education. The use of a population-based formula means that States with large program enrollments receive less per enrollee than States with less extensive programs, and there is a negative, though not significant, correlation between Federal funds per capita and State and local funds per capita.

Further, _if_ the formula is intended to compensate for lack of fiscal capacity--to increase the resources of States that are presumed to be less able to provide the services they need--then income may not be the proper measure. Personal income is only one source of revenue

TABLE II-1

ADJUSTMENT FACTORS FOR FEDERAL FORMULA, FY 1979

States with Factors That Increase Their Allotment by More Than 10%

Alabama
Arkansas
Georgia
Idaho
Kentucky
Louisiana
Maine
Mississippi
New Mexico
North Carolina
Oklahoma
South Carolina
South Dakota
Tennessee
Utah
Vermont
West Virginia

States with Factors That Decrease Their Allotment by More Than 10%

Alaska
California
Connecticut
Delaware
Hawaii
Illinois
Nevada
New Jersey
New York
District of Columbia

Source: Office of Vocational and Adult Education

TABLE II-2

INDEX[1] OF AVERAGE TEACHERS' SALARIES, 1978-1979, AND INDEX OF PERCENT RURAL POPULATION, 1970

Ten Highest Factor States			Ten Lowest Factor States		
	Index of Salaries	Index of Rural Population		Index of Salaries	Index of Rural Population
Alabama	82	157	Alaska	157	195
Arkansas	70	189	California	121	34
Kentucky	84	180	Connecticut	102	89
Louisiana	95	128	Delaware	97	105
Maine	81	186	Hawaii	122	64
Mississippi	73	209	Illinois	108	14
New Mexico	105	114	Maryland	112	88
South Carolina	80	198	Nevada	101	72
Tennessee	81	155	New Jersey	109	42
West Virginia	84	230	New York	125	54
United States	100	100	United States	100	100

1. The indices represent the ratio of the State average to the U.S. average.

Source: Digest of Education Statistics, 1980 available for education. Texas and Louisiana, for example, have large amounts of revenue from oil production, yet are below the national median per capita income. There appears to be little correlation between median per capita income and tax effort. Of the 10 highest factor States, all but Maine made a tax effort below the national average in 1977. Of the 10 lowest factor States, 7 made a tax effort above the national average in the same year. Therefore the formula directs funds preferentially toward States that have lower tax burdens (see Table II-3). The States receiving the reduced allotments frequently are those already heavily burdened by taxes.

It is also clear that dollars do not flow preferentially to States with high unemployment rates, another factor in intrastate formulas. According to Department of Labor statistics for April 1978, 7 of the 10 highest factor States had unemployment rates below the national average. Six of the 10 lowest factor States had unemployment rates above the national average.

Alternatives

The Federal formula is an instrument of Federal policy and can quite effectively influence the flow of Federal funds to the States.[1] Other distribution rules for allocating Federal VEA funds are possible without unduly complicating the process. The simplest change would be fine-tuning the formula--adjusting the constants in the formula, the weights assigned to the different segments of the population, or the constant in the adjustment factor. A more substantive change would be to change the measures in the formula. For example, "population" could be changed to vocational education enrollment, counts of target populations could be used, or some measure of need could be used, such as tax effort. A third, even more extensive revision would be to design a new formula to achieve a different purpose, such as supporting States with

TABLE II-3

UNEMPLOYMENT RATES AND INDEX[1] OF TAX EFFORT

	Highest Factor States			Lowest Factor States	
	Percent Unemployment Rates 1979	Index of Tax Effort 1977		Percent Unemployment Rates 1979	Index of Tax Effort 1977
Alabama	6.7	79	Alaska	10.0	106
Arkansas	5.5	79	California	6.2	120
Kentucky	4.7	81	Connecticut	5.1	100
Louisiana	5.4	76	Delaware	7.3	79
Maine	6.9	101	District of Columbia	7.8	120
Mississippi	5.5	96	Hawaii	6.8	115
New Mexico	5.8	79	Illinois	5.2	96
South Carolina	5.2	87	Nevada	5.1	63
Tennessee	4.6	83	New Jersey	5.7	110
West Virginia	6.6	78	New York	6.7	162
United States	5.8	100	United States	5.8	100

1. The index represents the State's tax effort to the average national tax effort.

Sources: Employment and Earnings, June 1979, Bureau of Labor Statistics, U.S. Department of Labor

Halstead and Welden, Tax Wealth in Fifty States: 1977 Supplement high rates of unemployment or supporting specific occupations or industries.

Shifting the population weights to give more weight to older populations would have the effect of redistributing funds from some rural States to some urban States, although none of the changes would be very large. By giving greater weight to the 25-64 stratum and the 20-24 stratum, for example, allocations to New Mexico, South Dakota, Mississippi, and North Dakota would be reduced, and allocations to the District of Columbia, California, Florida, and New York would be increased. Decreasing the constant would depress the effect of median income and would distribute proportionally more funds to the States with higher than average per capita incomes; increasing the constant would exaggerate the effect of median income and provide more funds proportionally to States with lower than average per capita incomes and fewer funds to States with higher than average incomes.

Another change would be to replace per capita median income with a measure of effort, such as education revenues per personal income, or vocational education expenditures per personal income, rather than capacity. Using vocational education expenditures divided by personal income as a measure of effort would favor the more industrialized and higher spending States such as Massachusetts, Washington, Illinois, New York, and North Carolina. Those losing the most VEA dollars per capita would be rural States, such as Wyoming, Arkansas, South Dakota, and Nebraska.

In general, measures that take into account the cost of providing vocational education, such as education revenues or vocational educational expenditures, would dramatically shift funds towards the States with larger percentages of metropolitan populations and away from the rural States. Using vocational education expenditures would favor the more industrialized urban States.

Another kind of alteration that could be made in the formula would be to change the mathematical relationship between per capita income and the adjustment factor. The current formula produces a linear relationship between the median income and the adjustment factor. Other mathematical relationshps would produce different effects. For example, if the factor were simply the national per capita income divided by the State's median per capita income, the very poorest States would receive proportionally more than they do now and the very wealthiest would receive less. The way in which the per capita income, or some similar measure of need, is mathematically incorporated into the allotment formula would affect the outcomes. The relationship could, for example, either exaggerate effects at the extreme conditions and more highly concentrate the funds in areas of greatest need or it could depress the effects on the poorest States.

The equalization of fiscal capacity--using the Federal money to equalize the resources available for vocational education across States--is an implicit goal of the current Federal-to-State formula. However, funds could be distributed to compensate for the needs of individuals, not school districts. Funds might be distributed according to the number of people with special needs such as the disadvantaged or the limited English-proficient. Or the goal might be more explicitly economic, such as distributing funds to States with high unemployment rates or to States with changing economics requiring new job skills.

If, for example, the number of disadvantaged were used, allotments would be dependent on the measure chosen, but if a uniform income level for "disadvantaged" were chosen it would still favor the southern and rural States. If, alternatively, AFDC eligibility were chosen it would probably still shift funds to the South but would favor the States with large central city populations at the expense of the rural States, where many poor do not apply for AFDC.[2] The use of unemployment rates to distribute funds would favor the northeastern States, probably at the expense of the western and southern States. In contrast, distributing the funds according to some measure of changing occupational skills, assuming that a measure could be devised, would very likely favor the western and southern States, where new industry has higher rates of growth.

The Distribution of VEA Funds by the States

States, which represent the second decision point in the distribution of funds, are responsible for the allocation of their Federal grants to local education agencies and other eligible recipients (OERs). Prior to 1976, Federal legislation gave the States and territories a great deal of discretion in distributing their allotments among their eligible recipients. The 1968 amendments to the Vocational Education Act required the States to give "due consideration" to the relative finanical ability of particular LEAs within the State, particularly those in economically depressed areas and those with high rates of unemployment, to the relative needs of all population groups, and to the "extra" costs of programs, services, and activities provided by LEAs. Although the intent to direct Federal funds toward communities with the greatest fiscal needs and with populations with special needs was clear, there were few requirements for implementation.

In drafting the 1976 amendments, the Congress concluded that the funds were not being distributed as it wished and prescribed, more precisely than ever before, how Federal funds were to be distributed intrastate. After the 1976 legislation was adopted, the subsequent rules, regulations, and interpretations by BOAE required the States to show, with examples, "the extent to which the resulting distribution is consistent with the objectives of the law."[3]

Specifically, the 1976 law requires States to give priority to applicants that:

> (1) are located in economically depressed areas and areas with high rates of unemployment, and are unable to provide the resources necessary to meet the vocational education needs of those areas without Federal assistance, and
>
> (2) propose programs which are new to the area to be served and which are designed to meet new and emerging manpower needs and job opportunities in the area and, where relevant, in the States and the Nation.

The law further requires States to use, as the two most important factors in allocating funds:

> (I) in the case of local educational agencies, the relative financial ability of such agencies to provide the resources necessary to meet the need for vocational education in the areas they service and the relative number or concentration of low-income families or individuals within such agencies, and (II) in the case of other eligible recipients, the relative financial ability of such recipients to provide the resources necessary to initiate or maintain vocational education programs to meet the needs of their students and the relative number or concentration of students whom they serve whose education imposes higher than average costs, such as handicapped students, students from low-income families, and students from families in which English is not the dominant language.[4]

Subsequent regulations and interpretations by BOAE set forth measures that could serve as proxies for the priority conditions and the factors and the requirement for a formula in which they are used. Level per pupil funding among districts was prohibited as it was in 1968, but BOAE went further by requiring examples of the difference between per pupil distribution in the wealthiest and the poorest districts.[5]

The distributional requirements reflect two distinct goals. One is to compensate for the lack of ability on the part of eligible recipients to provide vocational education programs of high quality out of their own resources. The use of relative financial ability, concentration of poverty, and unemployment rates and economic depression in districts with insufficient resources as factors influencing the distribution of funds presumably directs relatively more dollars to districts with fewer resources. The second goal is to improve the economic condition of areas, particularly those that are depressed. The law gives priority to districts with high rates of unemployment or those in areas designated as depressed, with inadequate resources to provide for their vocational education needs, and to those making efforts to meet the demands for workers in new and emerging fields of employment.

States are by no means restricted to the four factors in the law, only to the relative importance of each in limiting recipients and in weighting the flow of funds. They may also use other economic, social, and demographic factors as long as they relate to the need for vocational education. Other factors typically introduced by States include measures of secondary student dropout rates (e.g., Oregon, West Virginia, and Wyoming), measures of program quality or effectiveness (e.g., Idaho, Illinois, Rhode Island, and New Hampshire), and measures of degree of sex equity (e.g., Massachusetts, Nebraska, and New Hampshire). Further, some States use counts of the populations targeted for set-aside funds as distributional criteria (e.g., California, Missouri, Kentucky, Maryland, and Wyoming). Thus, the set asides not only prescribe the use of funds, they also influence the flow of funds to districts in some States.

There are two other requirements that apply selectively to the appropriations for Subpart 4, Special Programs for the Disadvantaged, and Subpart 5, Consumer and Homemaking Education. The Subpart 4 funds, in addition to the criteria already described, must give priority to applicants with high concentrations of youth unemployment and school dropouts. (These two factors must also be used in the distribution of Subpart 2 funds that are used for either cooperative programs or work-study programs.) Subpart 5 of the Act requires that one-third of the funds allotted to the States for Consumer and Homemaking Education must be used by recipients in economically depressed areas.

Each of the factors reflects some form of need: the wealth factors reflect a district's need for operating funds, and the economic factors reflect a community's need for different, or simply more, job skills. Although it is fairly clear what sorts of districts are intended to benefit from each factor, how to measure and scale each and then to formulate them to produce a single allocation is not clear. Despite the regulations and 4 years of clarifying memos from the OVAE, States still do not always know what is expected of them.

The factors that influence the distribution of funds that are included in the Act were assembled piecemeal in 1976 with no apparent analysis of how they would interact or simulation to determine their effects when combined. Although the goals and consequences of a single factor are quite predictable, the consequences of any formula which must incorporate all four are not intuitive, and it is not clear whether the goal represented by each of the criteria is being achieved. The OVAE has never been able to judge the effectiveness of the formulas, only the effectiveness with respect to one particular measure. Consequently, their analyses have been limited to evidence of level or near-level funding patterns and comparing selected recipients. Only with the use of statistical methods can the independent effect of each variable on the resulting distribution be measured.

Consequences of State Formulas

The Interim Report of this Study analyzed the process by which States distribute funds to local recipients in terms of clarity, internal consistency, sensitivity to changes, and adequacy of the data used. The University of California evaluated and compared various distributional models in use during 1978-79. They suggested that certain types of procedures might produce results that more effectively met the intent of the Act than others. In order to test these ideas, and other theories about the effects of the distributional process made on the basis of an examination of the laws, the formulas, and the implementation processes at the Federal and State levels for 1978-79, they examined data in 12 States.[6] The expenditures of Federal and, where available, State and local funds were analyzed with respect to three of the factors in the law that were generally included in State procedures, with respect to concentration of target populations, and with respect to other measures not specifically mentioned but which could illuminate the effect of distribution process--geographic location and concentration of minority populations. The methodology is described in more detail in the University of California's report to NIE.[7]

Means of Analysis. Two methods were used to examine the effects of three factors used in most States' allocation formulas. The first was to find the independent effect of a factor on the distribution of funds to determine whether a systematic, linear relationship between a characteristic of a recipient and its expenditures exists.[8] This test asks whether a change in a factor significantly changes the allocation among recipients if all of the other factors included in the analysis are held constant.

If in a given formula, each factor is represented by a properly scaled, linear measure and the factors are weighted and added to one another (as OVAE suggests in its draft manuals on the implementation of funding formulas), this test yields a statistically significant effect for each factor. If an effect is not detected, it means that no orderly or systematic relationship between the factor and the allocation could be found with any degree of reasonable confidence. It does not mean that there was no relationship. Many high need districts may have received more dollars per pupil than low need districts, but it did not happen consistently or systematically enough so that it could be stated with confidence that a change in a factor caused a change in the allocations. This test will be referred to simply as the "independent effect."

In the second test, the expenditures per pupil are ranked with respect to each factor and then separated into approximate quartiles so that about 25 percent of the students are in the lowest quartile, 25 percent of the students are in the low-mid quartile, 25 percent are in the high-mid quartile, and 25 percent are in the high quartile. The largest city has been omitted from the analysis so that its large enrollment will not distort the test. (The largest city would fill up an entire quartile in some States.) The test asks whether districts with greater need receive proportionally more dollars than districts with lesser need.

The ratio of the average expenditures per pupil in the quartile composed of high need districts to the average expenditures per pupil in the quartile composed of low need districts is computed. A ratio of more than 1 indicates that the average pupil expenditures in the "high need" quartile is higher than the average expenditures per pupil in the "low need" quartile. The comparisons are of average expenditures only. Even with a ratio of more than 1, some "high need" districts may receive fewer dollars per pupil than some of the "low need" districts. Further, other factors also influence the ratio, so one cannot say whether the particular factor under consideration is causing the differences in expenditures. Thus, although this is a statistically imperfect test, it is important because it does indicate whether or not the funds generally flow in the desired direction with respect to a mandated factor. This test will be referred to as the "ratio" test.

Relative Financial Ability. The regulations designate two acceptable measures for relative financial ability (RFA) of local education agencies. One, assessed property value, is the measure of fiscal capacity most frequently used in State aid formulas. The other is a measure of effort, computed by dividing tax revenue per capita by income per capita. The second of these two measures is very rarely chosen, since income data for school districts is only available in those few States where school districts are coterminous with county boundaries. A similar problem exists even for the first measure: total population is often unknown for a school district and, therefore, instead of property wealth per capita--the measure mandated by the regulations--States often use property wealth per average daily attendance or membership.

When the independent effects on secondary districts were tested in 11 States, none showed a significant independent effect of RFA on Federal expenditures per student (see Table II-4). In other words, in no State did RFA have a systematic effect on the distribution of Federal funds, after taking into account unemployment rates, location, and concentrations of poverty, minority, and target populations. Similarly, an analysis of the allocations to postsecondary institutions in 6 States indicated no significant systematic effect of RFA (see Table II-5).

In 9 of the 12 States examined, the property-poor secondary districts received more Federal funds per student than the property-rich secondary districts. In four States--Colorado, South Dakota, Utah, and Washington--the poorer districts received at least 80 percent more per student than the richer districts; in two States, New York and Pennsylvania, the wealthy districts received significantly more per student than the poor districts; and in Florida and California there was little difference in the average expenditures. A pattern is not evident in the expenditure of State and local funds. In five of nine States in which data were available, the wealthiest districts spent slightly more VEA funds per student than the poorest districts.

TABLE II-4

RELATIONSHIP BETWEEN RELATIVE FINANCIAL ABILITY AND THE OUTLAYS OF VOCATIONAL EDUCATION FUNDS, SECONDARY DISTRICTS, FY 1979

		Ratio of "poorest" quartile[1] to "wealthiest" quartile	
State	Independent Effect[2]	Federal Outlays	State and Local Outlays
California	No	1.05	0.94
Colorado	No	1.81	0.99
Florida	No	1.00	1.25
Illinois	No	1.21	0.93
Kansas	--	1.25	1.35
New York	No	0.37	--
Oklahoma	No	1.38	0.95
Pennsylvania	No	0.56	--
South Dakota	No	7.24	1.79
Texas	No	1.22	--
Utah	No	2.44	1.20
Washington	No	2.02	0.98

1. The independent effect is the regression coefficient tested for statistical significance.

2. "Poorest" quartile is comprised of those districts with the lowest RFA that include approximately 25 percent of the vocational education enrollment. The "wealthiest" quartile is comprised of those districts with the highest RFA that include approximately 25 percent of the vocational education enrollment.

Source: Benson and Hoachlander, The Distribution of Federal Funds Under the Vocational Education Act: Interstate and Intrastate Allocations

TABLE II-5

RELATIONSHIP BETWEEN DISTRIBUTION FACTORS AND THE VOCATIONAL EDUCATION OUTLAYS FOR POSTSECONDARY INSTITUTIONS IN SIX STATES, FY 1979

	Ratio[1] Federal Outlays	Ratio State and Local Outlays
Factor:	Relative Financial Ability	
California	0.94	1.09
Colorado	0.60	1.36
Florida	0.40	--
Illinois	1.20	0.93
Kansas	6.50	2.50
Pennsylvania	0.31	--
Factor:	Concentration of Low Income Families	
California	1.34	1.07
Colorado	2.46	2.26
Florida	1.63	--
Illinois	0.70	0.77
Kansas	5.28	0.94
Pennsylvania	0.50	--
Factor:	Unemployment Rates	
California	1.99	1.08
Colorado	1.91	1.40
Florida	1.31	--
Illinois	1.91	0.71
Kansas	1.90	--
Pennsylvania	1.30	--

1. Ratio is the average per pupil expenditure for the quartile of students in districts most in need with respect to the factor for the quartile of students in districts least in need.

Source: University of California, 1981

Ratios of allocations to postsecondary institutions were examined in 6 States. In 4 States, the average VEA expenditure in the wealthiest districts was higher than the average VEA expenditures in the poorest districts. Only Kansas spent significantly more VEA dollars per student in poor districts (see Table II-5).

The evidence from the tests leads to the finding that, at both the secondary and postsecondary levels, relative financial ability, as used by the States examined, did not have a systematic or consistent effect on the allocation of funds.

Applicants in Economically Depressed Areas and with High Rates of Unemployment. Although two separate priority factors, location in an economically depressed area and rates of unemployment, are mentioned in one section of the law, the first has proved to be of little value for assigning priorities to recipients. The most readily available and thus most commonly used measure, the Economic Development Administration's definition of economically depressed areas, now includes about 85 percent of the Nation's population. Therefore, it cannot be used to differentiate among school districts, and OVAE has ruled that a more discriminating measure must be used. Most States have turned to unemployment rates alone to satisfy that section of the law. Thus only the consequences of unemployment rates can be analyzed statistically.

The factor is supposed to be further restricted to applicants "unable to provide the necessary resources to meet the needs for vocational education." This, too, has proved unmanageable, and most States have ignored the condition entirely, apparently assuming that by including relative financial ability in their formulas, they are taking need into account. The language of the Act, however, suggests that the priority only applies to districts actually unable to adequately support programs.

Another problem States face in implementing this requirement is that unemployment rates, like income, are not available by school district and therefore county data must be used. County figures obscure differences among school districts within counties. However, since employment opportunities are not limited by the boundaries of a school district, there is some justification for accepting this measure despite the lack of district data.

Both tests were applied to unemployment rates to learn their effect on Federal expenditures (see Table II-5). The independent effect, tested in 11 States, was significant in only 1--Illinois. In the other 10, unemployment rates had no independent and systematic effect on the expenditure of VEA funds. Of the four States in which postsecondary distributions were tested, two States showed significant effect (see Table II-6).

The ratio test, the average Federal expenditures in secondary districts in the quartile with a high unemployment rate compared to the average Federal expenditures in secondary districts in the quartile with the lowest unemployment rate, showed different results. Of 16 States examined--12 in the University of California study and 4 more in an independent study--13 showed that the districts with high unemployment on the average did receive more Federal money than districts with low unemployment. The exceptions were Kansas, Utah, and Washington (see Table II-7).

The results of comparing the State and local expenditures in nine States were mixed: four States showed higher expenditures for students in districts with low unemployment and five states showed higher expenditures per student in districts with high unemployment.

In postsecondary districts in all six States, those with the lowest unemployment spent the largest number of VEA dollars per student.

TABLE II-6

INDEPENDENT EFFECTS[1] OF FACTORS ON THE EXPENDITURES PER PUPIL IN POSTSECONDARY INSTITUTIONS, FY 1979

	Factors		
State	Unemployment Rate	Relative Financial Ability	Concentration of Poverty
California	0	0	0
Colorado	0	0	+*
Florida	0	0	0
Illinois	+***	0	-**
Kansas	+***	0	-**
Pennsylvania	0	0	0

1. Independent effect is the regression coefficient in the multiple regression analysis, tested for statistical significance. Levels of significance are:

   * $p \leq 0.10$
   ** $p \leq 0.05$
   *** $p \leq 0.01$

Source: University of California, 1981

TABLE II-7

RELATIONSHIP BETWEEN UNEMPLOYMENT RATES AND THE DISTRIBUTION OF VOCATIONAL EDUCATION FUNDS, SECONDARY DISTRICTS, FY 1979

		Ratio[1] of "poorest" quartile to "weathiest" quartile	
State	Independent[2] Effect	Federal Outlays	State and Local Outlays
Alabama[3]	--	1.24	--
California	No	1.33	0.86
Colorado	No	1.55	1.42
Florida	No	1.20	1.18
Illinois	Yes	1.31	0.90
Kansas	--	0.91	0.74
Maryland[3]	--	2.97	--
New York	No	1.40	--
North Carolina[3]	--	1.48	--
Oklahoma	No	1.51	0.88
Pennsylvania	No	1.75	--
Rhode Island[3]	--	1.21	--
South Dakota	No	6.85	1.21
Texas	No	1.43	--
Utah	No	0.74	0.61
Washington	No	0.95	1.05

1. "Poorest" quartile is comprised of those districts with the highest unemployment rates that include approximately 25 percent of the vocational education enrollment. The "wealthiest" quartile is comprised of those districts with the lowest unemployment rates that include approximately 25 percent of the vocational education enrollment.

2. The independent effect is the regression coefficient, tested for statistical significance.

3. The ratios for these States were taken from the Hartle study, which compared not the first and fourth quartile, but the first and fifth quintiles. Thus the ratios are not strictly comparable to other States. The numbers compared were planned allocations, not actual expenditures.

Sources: Benson and Hoachlander, The Distribution of Federal Funds Under the Vocational Education Act: Interstate and Intrastate Allocations; and Hartle, Implementation of the Funds Distribution Provisions in the Vocational Education Amendments of 1976

The evidence points to the conclusion that the factor, unemployment rate, *was not incorporated into most States' procedures in such a way as to yield a systematic and consistent effect on the distribution of funds*. *In most States, however, the districts with high unemployment rates did, on the average, receive more VEA funds than districts with low unemployment rates*.

The two sets of findings are not inconsistent. They simply mean that the differences in funding levels could not be directly attributed to differences in unemployment rates.

Concentrations of Low Income Families or Individuals. Unlike relative financial ability, concentration of low income families or individuals (CLIF) is *not* clearly defined in the Act or in the regulations Since counts of low income families are not available by school districts, the OVAE has allowed States to choose alternative measures, such as students eligible for Title I or school lunch programs, as long as they are clearly described in the States' plans. The impact of this measure, however defined by the particular State, was examined using both tests.

The independent effect of CLIF was tested in 12 States (see Table II-8). At the secondary level, only New York and Texas showed a significant and positive independent effect of CLIF on Federal expenditures. At the postsecondary level, only Colorado showed a positive and significant effect. Kansas and Illinois had significant but negative coefficients, indicating CLIF is driving funds to postsecondary institutions with low concentrations of poverty.

Using the ratio test, four States showed a small advantage for districts with high concentrations of poverty (up to 25 percent), and nine States showed a larger advantage for the high concentration districts. In Utah, Colorado, and Rhode Island, however, the districts

TABLE II-8

RELATIONSHIP BETWEEN CONCENTRATION OF LOW-INCOME FAMILIES AND THE OUTLAYS OF VOCATIONAL EDUCATION FUNDS, SECONDARY DISTRICTS, FY 1979

		Ratio[1] of "poorest" quartile to "wealthiest" quartile	
State	Independent[2] Effect	Federal Outlays	State and Local Outlays
Alabama[3]	--	1.24	--
California	No	1.85	0.93
Colorado	No	0.89	1.42
Florida	No	1.11	1.04
Illinois	No	1.38	0.88
Kansas	--	2.99	1.05
Maryland[3]	--	2.28	--
New York	Yes*	7.73	--
North Carolina[3]	--	1.09	--
Oklahoma	No	1.86	1.06
Pennsylvania[3]	No	2.39	--
Rhode Island[3]	No	0.93	--
South Dakota	No	1.40	0.62
Texas	Yes***	1.33	--
Utah	No	0.71	0.95
Washington	No	1.21	1.11

1. "Poorest" quartile is comprised of those districts with the highest CLIF that include approximately 25 percent of the vocational education enrollment. The "wealthiest" quartile is comprised of those districts with the lowest CLIF that include approximately 25 percent of the vocational education enrollment.

2. The independent effect is the regression coefficient from the multiple regression ana[illegible], tested for statistical significance.

3. The ratios for these States are from Hartle's study, comprising the poorest and wealthest quintiles, not quartiles. Thus, they are not strictly comparable to other ratios. They are also planned allocations, not outlays.

* Significant at $p \leq 0.10$
***Significant at $p \leq 0.01$.

Sources: Benson and Hoachlander, The Distribution of Federal Funds Under the Vocational Education Act: Interstate and Intrastate Allocations; and Hartle, Implementation of the Funds Distribution Provisions in the Vocational Education Amendments of 1976 with *low* concentrations spent more, on the average, than districts with high concentrations.

A similar comparison of postsecondary institutions in six States shows that in four States the institutions with high concentrations averaged relatively more VEA funds, and in two States, Illinois and Pennsylvania, the institutions with low concentrations averaged relatively more VEA funds.

The evidence for the effect of concentration of low income families or individuals is similar to that for the previous factors: *the analysis does not indicate that the factor was used in such a way as to have a consistent and systematic effect on the allocation of funds*. Yet, in most States, those districts with high concentrations received, on the average, more VEA funds per pupil than districts with low concentrations.

Programs New to the Area, Designed to Meet New and Emerging Manpower Needs and Job Opportunities. This priority factor proved to be the most difficult to quantify for inclusion in formulas. The emphasis on "new" programs requires an interpretation of "new." How long is a program new? How much of a change in an existing program qualifies it as "new?" It is the one factor that can be manipulated locally. As a result, most States have not used it in their procedures.

In fiscal year 1979, only seven States reported using this factor. States that did use it usually awarded points for new programs, or ranked districts with regard to new initiatives.

There are two qualitative differences between this factor and the other three. It is the only factor that does not address some measure of local financial need, so that even the wealthiest of districts can receive funds for this factor. Further, it is easier for large districts, with many schools and many programs, to make changes and thus receive allocation points. Small districts are more constrained by the unavailability of teachers and by high start-up costs, so that program changes are less feasible for them.

Shifts In Distribution Patterns

One reason that the law and the regulations gave more explicit requirements for the distribution of Federal VEA funds was the GAO report finding in 1974 that--

> Federal funds have been distributed by the States reviewed in a variety of ways, many of which do not necessarily result in funds being targeted to geographic areas of need. . . . Some major practices noted were making funds available to all local education agencies within a State, rather than concentrating funds in selected agencies with high needs. . . .[9]

The preceding section analyzed only the consequences of current formulas. It did not consider what changes may have occurred as a result of the 1976 amendments.

The facts that data collected before the implementation of VEDS have been of questionable validity[10] and that current data are collected according to new definitions and procedures limit the comparisons that can be made, but do not rule out all analyses. With reasonable assumptions regarding the changes in school district characteristics, comparisons can be made between 1975 expenditures or 1976 grants and 1979 expenditures.[11]

Conditions for the Analyses

The basic sources of vocational education data for the analyses are the fiscal year 1979 VEDS and the data system mandated in Section 437 of the General Education Provisions Act for the 1975 expenditures and 1976 grants. The 437 system was less carefully edited and validated than the VEDS data.[12] It fails to provide proper identification for postsecondary institutions, it is missing data for many secondary districts (which may mean either no expenditures or expenditures not reported), and it contains duplicated counts of "beneficiaries" rather than unduplicated counts of students. Further, the expenditures reported in both systems include carryovers from previous years and exclude funds obligated but not spent.

Despite the limitations on the data, the following assumptions can be made for secondary school districts:

(1) The relative size of enrollments among districts in 1975-76 is the same as in 1979.

(2) The relative district characteristics within States that influence the distribution of funds to districts and the relative size of the target populations and minority populations were the same among districts in 1975-76 as in 1979.

In other words, any changes in enrollments or district characteristics between 1975 and 1979 were proportionally the same in all districts within a State. Although obviously there were different rates of change among all districts, it is unlikely that the size of the changes would affect the analyses. It is improbable, for example, that a large number of districts with low relative financial ability in 1976 suddenly became districts with high financial ability, or that many districts with large numbers of disadvantaged students became districts with few disadvantaged students in a matter of 3 years. The assumptions thus seem reasonable. The factor probably most susceptible to error is the unemployment rate, which fluctuates more than the other factors.

Analyses of Changes

Two analyses of shifts in expenditures that parallel the analyses in the previous section were undertaken. First, the increases or decreases in per pupil expenditures between 1975 and 1979 were examined for the three factors, RFA, unemployment rates, and concentration of poverty, ranked by quartiles. This analysis tells whether the districts with the greatest need increased their shares of the VEA funds at a greater rate than the districts with the least need. Second, the differences in expenditures per pupil between 1975 and 1979 were analyzed with respect to the same three factors, concentration of target populations and minorities, and location. The resulting regression coefficients indicate the changes in expenditures per pupil that can be attributed to a single particular factor (see Table II-9).

In a simple comparison among quartiles, the most significant improvement turns out to be the changes with respect to relative financial ability (see Table II-10). In 9 of the 10 States, the largest percent gains were in the districts with the lowest or next to lowest RFA. In Illinois, however, the wealthier districts gained relatively more than the poor districts.

The analysis of the independent effect of RFA on changes in expenditures per pupil indicates significant shifts related to RFA only in California and Washington. In 3 of the 10 States, RFA shifted funds to wealthier districts, though not significantly.

The changes in the per pupil expenditures by quartile with respect to unemployment rates are weaker but they are still, on balance,

TABLE II-9

EFFECTS OF FACTORS ON THE CHANGES IN EXPENDITURES PER PUPIL IN TEN STATES BETWEEN FY 1975 and FY 1979, SECONDARY DISTRICTS

	Relative Financial Ability	Unemployment Rates	Concentration of Poverty
California	+*	+	+*
Colorado	-	+	+
Florida	-	+	+
Illinois	+	+	-
New York	+	-	-
Oklahoma	+	+*	-*
Pennsylvania	+	+	-
Texas	-	+	+*
Utah	+	-	-
Washington	+*	-	-

* Statistically significant regression coefficient.

Source: Hoachlander and Johnson, An Analysis of the Changes in the Distribution of VEA Funds to Secondary LEAs

TABLE II-10

PERCENTAGE CHANGE IN FEDERAL VEA FUNDS EXPENDED IN SECONDARY DISTRICTS IN TEN STATES, FY 1976 to FY 1979, BY LEA GROUPED IN QUARTILES BY RELATIVE FINANCIAL ABILITY

	Lowest 1st	2nd	3rd	Highest 4th
California	37	-1	8	9
Colorado	63	99	-29	-7
Florida	-12	567	11	65
Illinois	15	-7	36	1
New York	465	60	-32	-7
Oklahoma	37	97	15	55
Pennsylvania	104	313	105	36
Texas	515	136	200	147
Utah	64	46	-24	2
Washington	178	275	51	-34

Source: Hoachlander and Johnson, An Analysis of the Changes in the Distribution of VEA Funds to Secondary LEAs positive (see Table II-11). In five States the largest gains were in the districts with the highest unemployment rates; in three States, Colorado, Illinois, and Washington, the largest gains were in the districts with the lowest rates. When other factors were held constant seven States showed positive changes; however, only Oklahoma showed a significant shift to districts with higher rates of unemployment. Again, three States show unemployment shifting funds to districts with lower rates.

The most negative results in terms of intrastate shifts in allocations were with respect to concentrations of low income families (see Table II-12). In half of the States the districts in the quartile with lowest rates of poverty increased their expenditures proportionally more than other districts.

The analysis of the independent effect of the changes in funding bears out the same finding. In 6 of 10 States, this factor caused more funds to be allocated to districts with the lowest concentrations of low income people.

The inconsistency of the results with respect to the three factors tested demonstrates the problem inherent in attempting to combine multiple factors into a single formula. The State of Illinois, for example, apparently developed a formula that directed more funds to districts with high concentrations of poverty, but, at the same time, the districts with high relative financial ability and low unemployment also received more money.

The changes in the States' formulas also showed differential shifts with respect to community size (see Table II-13). The largest cities in the 10 States generally benefited the least from the 1976 distribution requirements. In California, Texas, Utah, and Washington the largest city gained the least in comparison to other communities,

TABLE II-11

PERCENTAGE CHANGE IN FEDERAL VEA FUNDS EXPENDED ON SECONDARY DISTRICTS IN TEN STATES, FY 1976 to FY 1979, BY LEA GROUPED IN QUARTILES BY UNEMPLOYMENT RATE

	Lowest 1st	2nd	3rd	Highest 4th
California	-19	11	16	21
Colorado	194	-18	7	76
Florida	11	29	261	138
Illinois	55	4	12	9
New York	140	-30	28	350
Oklahoma	71	86	147	123
Pennsylvania	49	107	75	317
Texas	163	104	171	351
Utah	-2	-25	9	31
Washington	256	174	34	-14

Source: Hoachlander and Johnson, *An Analysis of the Changes in the Distribution of VEA Funds to Secondary LEAs*

TABLE II-12

PERCENTAGE CHANGE IN FEDERAL VEA FUNDS EXPENDED IN TEN STATES, FY 1976 to FY 1979, BY LEA GROUPED IN QUARTILES BY CONCENTRATION OF LOW-INCOME FAMILIES

	Lowest 1st	2nd	3rd	Highest 4th
California	-22	1	17	33
Colorado	187	54	61	53
Florida	180	68	43	153
Illinois	34	16	18	3
New York	-100	1	-35	284
Oklahoma	101	24	94	142
Pennsylvania	80	38	82	314
Texas	71	289	134	202
Utah	63	-12	-14	2
Washington	155	123	157	30

Source: Hoachlander and Johnson, *An Analysis of the Changes in the Distribution of VEA Funds to Secondary LEAs* and in 8 of the 10 States the largest cities did worse than average. In three of the States the rural districts and in three the small and medium-size cities benefited the most from the changes.

TABLE II-13

PERCENT CHANGE IN FEDERAL FUNDS EXPENDED FY 1976 to FY 1979, BY COMMUNITY SIZE FOR TEN STATES

Size	Biggest Gains Number of States	Smallest Gains Number of States
Rural	3	1
Cities, 10,000 to 100,000	3	2
Cities over 100,000	2	3
Suburbs of Largest City	2	0
Largest City	0	4

Source: Hoachlander and Johnson, An Analysis of the Changes in the Distribution of VEA Funds to Secondary LEAs

The Distribution of State and Local Funds

State Funds for Vocational Education

The States' own funds for vocational education are distributed to districts in a variety of ways. According to a survey of State vocational education directors conducted by NACVE in 1978, in 30 of 39 responding States, vocational education received categorical aid from the State.[13] Twenty-four of the 30 States used a formula to distribute their own funds.

State aid, distributed by formula, is also used to support vocational education at the secondary level. State aid formulas are designed to equalize resources across districts and, in most States, their intentions are consistent with the Federal distributional policy.

Relative financial ability is the principal measure used in State aid allocation formulas, with the poorer districts (usually poorer in terms of property wealth) receiving proportionally more State aid than the wealthy districts. A variant on the per pupil distribution used in a growing number of States is the assignment of a weight (ratio of the costs per pupil for various categories of vocational education programs to the cost per pupil of an average student) to vocational education students. This compensates LEAs for the higher costs associated with vocational education.

Postsecondary and adult program distributional procedures are more diverse. Some States distribute funds through State aid formulas; others target funds or use categorical funding by institution or by district. In addition, postsecondary and adult programs in most States may charge tuition for their programs and, therefore, are not as dependent on tax revenues.

The Local Education Agency

The third distribution point is at the local level--the school district (LEA). Most of the districts in the Nation have only one school that provides vocational education programs and therefore the distribution of Federal funds is not an issue in these districts. Most of the secondary vocational education students, however, reside in districts that do have more than one vocational education facility; these districts must decide how to allocate their Federal and State funds among their schools and how to generally provide support services for their vocational education programs. Furthermore, even in those districts that have only one facility offering vocational education, (including most postsecondary districts) but that offer nonvocational education as well as vocational, unless the State and local funds are categorical, district administrators must decide how to allocate funds among programs. Therefore, the local education agency may represent the most influential fiscal decision point in determining the quality and extensiveness of vocational education offerings.

There are no distinguishable patterns for the distribution of funds by local education agencies. Districts may have formulas. If they do, the factors that influence the State allocations, such as tax wealth and concentration of poverty, are not likely to be used since they tend to be district or county averages, reflecting the resources available to all of the schools in the district. Therefore, any formal distribution is most likely to be based on enrollment, proposed budgets, or project applications.

Summary and Findings

Federal Formula

The way in which Federal funds are allocated to the States and territories does not assure that those recipients with limited resources for vocational education always benefit. One reason is that the adjustment factor in the formula, median income, is not necessarily a measure of the fiscal capacity of the State. Median income also varies with the relative cost of living in a particular locale. Southern States generally receive higher allotments per capita population than northern States, and rural States generally receive higher per capita allotments than urban States because of differences in wealth. However, because of differences in costs of living, the needs of the southern and rural States may not be as great. If median income were adjusted for cost of living, the distribution would look substantially different. It would also be possible to adjust the formula by other factors, such as the ones States use to distribute funds to their districts--unemployment rates or economic depression, for example. If any such factors were used, they would direct the flow of funds toward States that are more urbanized and industrialized and those that have older populations.

States' Formulas

The Interim Report concluded that none of the methods used in fiscal year 1979 was capable of fully incorporating all the factors the law specifies to influence allocations of funds, and that the consequences of the allocation processes would bear little systematic relationship to the targeting goals of the law. This was borne out by the data and subsequent analyses. It is difficult to say whether the resulting distribution is fulfilling the intent of the law or to suggest what procedures would produce distributions most consistent with the intent of the law. These questions cannot be answered simply by looking at allocations to applicants. In practice, OVAE has held that a distribution that is nearly uniform is unacceptable. But if some of the factors are inversely related to one another (i.e., a high need district according to one criterion is low need according to another) even a uniform, or seemingly random, allocation could meet the requirements of the law.

Two analyses were conducted on each of three factors that are mandated in the law and generally used by the States: relative financial ability, concentration of low income families, and unemployment rates. The first analysis tested the independent effect of each factor by seeking to find out whether a change in the factor under consideration, assuming all other factors included in the analysis were held constant, would significantly affect the allocation of funds to recipients.

The other analysis compares the average expenditures per student in the districts with the highest need to average expenditures per student in the districts with the lowest need. This measures the results for each factor, without attempting to account for the influence of other factors on the allocation.

The results of these two analyses, which used expenditures as proxies for allocations, indicate the extent to which the factors operated to affect the distribution of Federal funds in fiscal year 1979. Expenditures in secondary school districts in 12 States showed no significant independent effects attributable to relative financial ability. Unemployment rates had a significant independent effect in only one State, Illinois, and the factor of concentration of low income families factor was statistically significant only in New York and Texas. Thus, for the three mandated factors that were used in the procedures of most States, a change in one particular factor showed no systematic effect on the allocation of funds, when the other two factors, concentrations of target populations and minorities, and size of community were held constant. The same test was used to determine the independent effects of the factors upon the expenditures in postsecondary institutions in six States. The results were similar: the factor of relative financial ability was not significant in any of the States; unemployment rates were significant in two; and concentration of poverty was positive and significant in one.

In short, none of the three mandated factors analyzed had an orderly, systematic independent effect on the allocation of VEA funds in the States examined in 1979. In a few States, a single factor did show an effect, but in no State did all factors show significant independent effects. In fact, no State had a procedure in place in fiscal year 1979 that would be expected to lead to independent effects.

The second analysis which compares the average per student expenditures in areas with high need to those in areas with low need, showed more positive effects in line with the intent of the law. For each of the three factors, at least nine States showed higher expenditures per student in the secondary districts with high need, but three States showed higher expenditures per student in secondary districts with low need. There are no consistent relationships in the expenditure of State and local funds: in about half the States expenditures were higher in the low need districts. State and local expenditure data, however, are less accurate than VEA expenditure data, since many types of State and local expenditures are often not reported and the findings are less reliable.

The results of the analysis of the expenditure of VEA funding by postsecondary schools in six States was mixed: in all States, schools in areas with higher unemployment rates spent considerably more than schools in areas with low unemployment rates; in four States schools with higher concentrations of low income students spent more than schools with low concentrations; but in only two States, schools with low relative financial ability spent more than schools with high relative financial ability.

On the average, districts that were the most needy with respect to each factor were spending more VEA dollars than districts that were less needy. Thus in most States Federal funds were finding their way to the districts most in need, but not because the factors produced systematic or uniform effects. In gross, average terms, the distribution patterns indicate a responsiveness to the intent of the legislation but there still are many districts that rank high on the need scales that receive fewer funds than some districts that rank low. Furthermore, the differences between the average of the most needy districts and the average of the least needy were not very large. In nearly half the ratios calculated, the average expenditures of the high need districts were less than 25 percent more than average of the low need districts.

The Interim Report suggested that some of the factors required by the law, or added by the States, may be inversely correlated with one another--i.e., districts with low relative financial ability have either low unemployment or low concentrations of low income families. This suggestion was borne out by the analyses made with the 1979 data. Consequently, in many States it is difficult to observe differences in the distribution of funds. If each factor represents a unique need, then, in effect, different proportions of the funds are distributed for different purposes. However, if the inverse correlation is due to the shortcomings of the measures used, the intent of the law may be frustrated. If, for example, relative property wealth is distorted by inflated assessment rates in some counties and does not represent the relative financial ability of the school district (a fairly common problem in many State aid formulas), then the intent of the formula to compensate is distorted. Inverse relationships make it very difficult to judge the effectiveness of allocation of funds in a State with respect to any one factor.

An analysis of the relationships among the factors in 12 States showed that there were many instances where inverse (and nonintuitive) relationships existed. In California, for example, low relative financial ability was associated with low unemployment, and in Kansas and Utah, low relative financial ability was associated with low concentration of low income families.

Patterns of expenditures among recipients in fiscal year 1979 also were compared to the patterns of reported expenditures among recipients in fiscal year 1975, for 10 States. Data were available only for secondary school districts. If the 1976 legislation made the allocations procedures more responsive to the intent of the law, as expected, then it would be expected that the VEA expenditures in school districts had increased more in districts with the greatest need than in districts with the least need. In general, the analyses showed improvement with respect to relative financial ability; weak improvement with respect to unemployment rates; and no improvement with respect to concentration of low income families. In 4 of 10 States analyzed, the distributions appeared to be further from the Federal intentions in 1979 than in 1975. In each of these States, for two of the three factors examined, the districts with the least need gained more proportionally than districts with the greatest need.

The lack of consistent and significant effects in the analyses of the consequences of the States' distribution procedures supports the findings that the procedures are too complex and that they try to achieve too many results with too few funds to be effective with respect to any single result. Statistical analyses fail to show any consistent results among States, and although the formulas are having some impact on allocations, there are more aberrations and randomness than there could be if sound, more clearly defined procedures were used.

FOOTNOTES

1. Two recent studies of the simulated effects of changes have been conducted: Friedrich J. Grasberger et al., Developing and Applying Analytical Tools to Evaluate the Distributional and Equalizational Effects of Federal Grant-in-Aid Formulas and to Improve Formula Performance, Final Report (Rochester, N.Y.: Center for Governmental Research, Inc., January 1980), and Maureen W. Murphy, "Analysis of the Allotment of Federal Vocational Education Funds," prepared under Department of Education contract no. 300-79-0732 (Silver Spring, Maryland: Applied Management Sciences, September 1980).

2. Stuart A. Rosenfeld, A Portrait of Rural America: Conditions Affecting Vocational Education Policy, Vocational Education Study publication no. 6 (Washington, D.C.: Government Printing Office, 1980).

3. Policy and Program Memoranda from the Bureau of Occupational and Adult Education to the States, October 1979 and December 1979.

4. P.L. 94-482, Section 106(a).

5. Policy and Program Memoranda. See note 3 above.

6. All analyses did not include all 14 States. All of the necessary data for a specific analysis was not available in each State. The analyses, therefore, are based on the availability of data. Most postsecondary analyses, for example, were limited to six or fewer States.

7. Another issue raised was whether different algorithms for combining factors would result in an allocation to each recipient. The contractors developed a typology of the procedures in use in fiscal year 1979 and suggested which would be the most effective. Unfortunately, the results in the States tested failed to reveal any patterns. States that transformed their data into scaler variables using sophisticated techniques produced no better results in general than States that simply classified recipients, for example, as high, medium, or low. States that used complicated weighted factor formulas produced no different results than, for example, Texas, which used no method at all that was discernible.

8. This is done with a multiple regression stepwise analysis where the unit of observation is the school district, with each district, regardless of size, equal to all other districts. In order to control for district size, the district vocational education enrollment was entered as the first independent variable.

9. General Accounting Office, What is the Role of the Federal Assistance for Vocational Education? Report of the Comptroller General to Congress (Washington, D.C.: U.S. Government Printing Office, 1974).

10. Charles S. Benson, E. Gareth Hoachlander, and Bronia Lena Johnson, An Assessment of the Reliability and Consistency in Reporting of Vocational Education Data Available from National Information Systems, Report prepared under the National Institute of Education contract no. 400-78-0039 (Berkeley: University of California, 1980).

11. E. Gareth Hoachlander and Bronia Lena Johnson, An Analysis of the Changes in the Distribution of VEA Funds to Secondary LEAs, Report prepared under the National Institute of Education contract nos. NIE-P-81-0102 and NIE-P-81-0108 (Berkeley: University of California, 1981).

12. Benson, Hoachlander, and Johnson, op. cit.

13. Memo from Michael Morton to Dan Durham, "Summary of Information from Questionnaires Sent to Other States on State Support for Vocational Education," Maryland State Department of Education, August 18, 1978.

CHAPTER III. VOCATIONAL EDUCATION RESOURCES: PURPOSES, PROGRAMS, AND PARTICIPANTS

Introduction

The distribution of resources in terms of the four reference points specified in Section 523(b) of the Education Amendments of 1976 --services, occupations, target populations, and enrollments--cannot be analyzed so neatly as the distribution factors considered in the preceding chapter. The four points are, in effect, artificial, specified to help describe how the legislation works with respect to its goals. They do not necessarily represent terms for which expenditure data are routinely collected. But since the distribution of funds is simply a proxy for what is really important--the availability of resources in schools--information suggesting both the use of funds and resource expenditure patterns is presented here.

The first reference point, enrollments, is indicative of where and on whom vocational education funds are spent. Most funding mechanisms in the Act are not explicitly based on enrollment, yet they can only be rationally evaluated and interpreted with respect to who are served. Funds are distributed to States and territories on the basis of population, but the intrastate mechanisms for distributing funds are based on enrollments. Postsecondary and adult programs are funded through a set aside, established arbitrarily, but the programs themselves are evaluated and compared on the basis of enrollments. Ready access to high quality programs for all persons is a goal of the Act, but the degree to which it is attained for different racial and ethnic minorities and for women is measured by enrollments. Community size is not a factor at all in policies, yet the relative costs of providing quality programs are in part a function of size and location. Descriptions of some of the patterns of enrollments and expenditures per pupil broken down by State, by district, and by student characteristic, should illuminate some of the effects of these policies and the issues they represent.

Another reference point, services, has been defined for purposes of analysis as what is purchased with the funds. Through a number of different activities, the Act attempts to stimulate certain services or activities that are consistent with its goals. It requires expenditures on certain services, such as the funds for the sex equity coordinator; it permits but does not require expenditures on specific activities such as co-op or day care programs; it encourages expenditures on general types of activities or services such as program improvement; and it offers incentives for some services such as setting aside 10 percent of the 102(a) funds for special services for the handicapped. This chapter analyzes and compares these different mechanisms and provides information that might suggest which are most effective for producing changes in the system.

The third reference point, target populations, is intended to depict funding patterns with respect to the concentration of populations targeted in the Act, and to describe for each the patterns of excess costs that are incurred. The set asides were introduced to increase the likelihood that students with higher than average costs of education, such as the limited English-proficient, would be as well served as average students. To what extent did that occur? If those provisions are effective, districts with high concentrations of target populations would be expected to have high per pupil expenditures and high reported excess costs. This chapter describes the expenditure patterns for funds set aside in the Act and analyzes how concentrations of target populations affect districts' total expenditures per pupil.

The last reference point, occupations, raises issues of access to programs and relatedness of training to employment opportunities, both purposes of the Act. Who are enrolled in what occupational programs, and are the programs related to job opportunities? In addition to presenting enrollment patterns by program (expenditures by programs are unavailable for fiscal year 1979), we have categorized the programs in terms of two measures which indicate aspects of economic opportunity. Expected wages indicate whether enrollment patterns among different segments of the population differ with respect to income opportunities, and expected job opportunities indicate whether enrollment patterns among different segments of the population differ with respect to employment opportunities.

There are two basic sources of data for the analyses presented in this chapter: the fiscal year 1979 VEDS from NCES and a survey of districts in 10 States conducted by the School of Education at the University of California, under contract to the NIE, during the school year 1979-80. Each is subject to certain limitations. The VEDS expenditure data are based on reported outlays and therefore may include carryover funds from the previous year and exclude carryover funds from the current year. To supplement data collected by VEDS in order to answer questions VEDS could not address, and to be able to perform intrastate analyses, the University of California conducted its survey in randomly selected secondary districts and postsecondary institutions in 10 States. The States were not randomly sampled, but were carefully chosen to include the five "core" States and other, more rural, States from each region of the country (see Appendix B). The data from the survey, then, are indicative of patterns within States and among some States but cannot be extrapolated to the Nation as a whole.

The differences among the States are striking and often there are logical explanations for unusual data that appear in the tables. In most cases, no attempt is made here to explain why such data turn up; instead, the emphasis is on using available data to illuminate the policy issues.

Distribution of Resources: Enrollments

The distribution of most vocational education funds is based on some measure of enrollment. Even those categories of funds that are distributed on a project or application basis are ordinarily justified on the basis of the number of students served. The Vocational Education Act prohibits funds from being distributed solely on the basis of enrollment (equal per pupil funding to all recipients), but enrollment is included along with the prescribed distribution criteria in every State formula.

Enrollment Characteristics

Since the purpose of the Vocational Education Act is to assist the States in providing ready access to vocational education of high quality for all persons of all ages in all communities, it is useful to look at how it serves segments of the population that historically have been underserved by our educational institutions. One indicator of equity is the extent to which minority populations enroll in any occupationally specific program. Simple enrollment counts of minority students, however, are of little help in interpreting participation, without taking into account the total number who are eligible to enroll. To say that 1 percent of vocational education students were Asian Americans, for someone who knew nothing about the racial and ethnic distribution of the population, would lead to a different conclusion in California than it would in Kansas. Therefore, this section will make use of indices, which are the ratios of percent minority enrollment in vocational education programs to the percent minority enrollment in the total school district or institution. An index of more than one for a particular group of students, for example, indicates a higher representation of that group in the vocational education programs than in the school districts of the State, and an index of less than one indicates a lower representation in the vocational programs than in the school districts.

Table III-1 presents the indices for the male, female, black, Asian American, Hispanic, and native American populations for both secondary districts in fiscal year 1979. All minorities in most States were enrolled in secondary vocational education programs in lower relative proportions than nonminority students.

The data were further disaggregated to look at two areas of special concern, the large cities and rural areas (Table III-2). These data show that blacks and Asian Americans are highly represented in the vocational education programs of the largest cities of the States. In the rural districts, however, in most instances minorities are not participating in vocational education to the degree that they are represented in the total school system. This may be attributed to the domination of vocational agriculture in rural districts and the very small proportion of all farmers who are members of minorities.

Federal funds are distributed to the States according to population rather than enrollments. Therefore, it is useful also to compare both the total enrollments and the occupationally specific enrollments in vocational education programs among States with respect to each State's population, which is an approximate measure of the relative size of the population eligible to enroll (Figure III-1).[1] The secondary enrollments vary from about 19 students per 1000 State residents in California and 20 per 1000 in Indiana to more than 80 per 1000 residents in Wisconsin and New Jersey. Postsecondary enrollments range from 4 students per 1000 in Wyoming and the District of Columbia to more than 70 per 1000 in Washington and Minnesota. Thus the Federal funds per eligible student and per student in occupationally specific programs vary considerably among States, depending on the relative enrollments in vocational education programs. Variations in enrollment rates may be indicative of the degree to which vocational education is

TABLE III-1

INDEX[1] OF REPRESENTATION BY RACE, ETHNICITY, AND SEX OF STUDENTS ENROLLED IN SECONDARY VOCATIONAL EDUCATION[2] FOR SELECTED STATES,[3] FY 1979

	Male	Female	Native American	Black	Asian American	Hispanic	White
California	.90	1.10	.62	.85	.82	.94	1.06
Colorado	.85	1.15	1.74	1.02	.71	1.01	.99
Florida	.83	1.17	.86	.96	1.34	1.17	.99
Illinois	.99	1.01	.44	.72	.82	.64	1.13
Kansas	.81	1.19	1.38	.98	.98	.83	1.00
Pennsylvania	.82	1.18	.63	.82	.50	.64	1.03
South Dakota	1.36	.64	.69	.28	.31	.12	1.04
Texas	1.35	.65	1.18	.71	.13	.63	1.24
Utah	.99	1.01	.65	.57	.80	.57	1.03

1. Index represents the ratio of percent of ethnic, racial, or sexual group enrolled in vocational education to the percent of that group in the total enrollment of the district.

2. Enrollments include all vocational education programs, not just occupationally specific programs.

3. States were selected from those chosen for inclusion on the basis of the availability of total school district data to compute ratios.

Source: The Distribution of Federal Funds Under the Vocational Education Act: Interstate and Intrastate Allocations, University of California, 1981

TABLE III-2

INDEX[1] OF REPRESENTATION BY RACE AND ETHNICITY OF STUDENTS ENROLLED IN VOCATIONAL EDUCATION[2] IN THE LARGEST CITIES AND RURAL AREAS OF SELECTED STATES[3] FOR SECONDARY PROGRAMS, FY 1979

Districts With Largest Cities

	Native American	Black	Asian American	Hispanic	White
Los Angeles	.46	1.27	.73	.91	.95
Denver	1.15	1.27	1.05	.90	.94
Miami-Dade	-[4]	1.03	1.81	1.16	.85
Chicago	.69	.94	1.00	.75	1.30
Topeka	2.20	1.52	2.17	1.12	.84
Philadelphia	-	.94	.55	.64	1.19
Houston	-	1.06	.27	.87	1.03
Salt Lake City	.09	.22	.26	.13	1.16

Rural Areas

	Native American	Black	Asian American	Hispanic	White
California	.67	.84	.66	.72	1.09
Colorado	1.25	-	-	1.01	.99
Florida	-	.87	-	.66	1.06
Illinois	-	.90	.15	.56	1.00
Kansas	-	-	-	.52	1.01
Pennsylvania	-	1.01	.57	1.16	.99
South Dakota	.70	-	-	-	1.03
Texas	2.22	.84	.67	.66	1.16
Utah	.53	-	-	.51	1.03

1. Index represents the ratio of percent of ethnic or racial group enrolled in vocational education to the percent of that group in the total enrollment of the district.

2. Enrollments include all vocational education programs, not just occupationally specific programs.

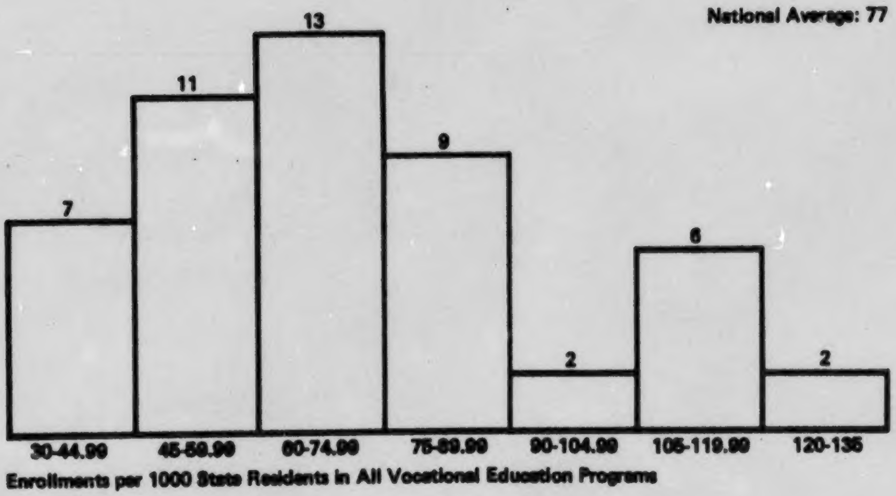
3. States were selected from those chosen for inclusion on the basis of the availability of total school district data to compute ratios.

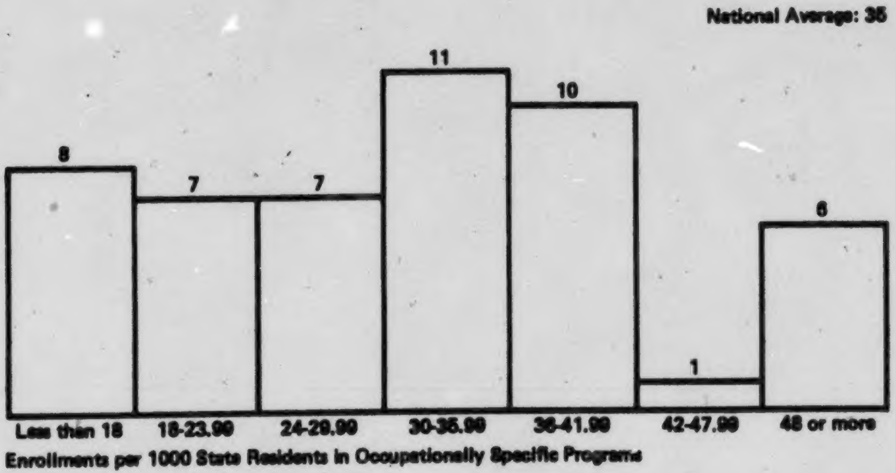
4. Empty cells mean that enrollment in that district for that particular group was less than 100.

Source: The Distribution of Federal Funds Under the Vocational Education Act: Interstate and Intrastate Allocations, University of California, 1981

FIGURE III-1

VOCATIONAL EDUCATION ENROLLMENTS PER 1000 STATE RESIDENTS BY NUMBER OF STATES, FY 1979





Source: Vocational Education Data System, FY 1979

emphasized in a particular State, but they also may depend on which level of education predominates. Adult programs, for instance, tend to be of shorter duration than secondary programs, so that more adults can be served (and counted) in a given year at a particular level of effort.

The total vocational education enrollment per 1000 State residents varies from less than 40 in Michigan, Pennsylvania, and the District of Columbia to more than 120 in Florida and Wisconsin. Differences might be explained by funding priorities given to industrial arts, a short prevocational program that serves large numbers of students in some States. Enrollments in occupationally specific programs vary from less than 15 per 1000 in Wyoming, Arizona, New Hampshire, and New Jersey to more than 60 in Washington, Minnesota, and North Carolina.

Differences by Level of Education

Section 110 of the Vocational Education Act prescribes that 15 percent of the basic grant and program improvement and supportive services money be used to pay up to 50 percent of the cost of vocational education for persons who have completed or left high school. For VEDS data collection purposes these students have been categorized as either postsecondary or adult: the students enrolled in an associate degree program are designated as postsecondary, and students in programs which may lead to a certificate, a credential, or simply a completion are designated as adult. Adult programs are further separated into long-term programs of 500 hours or more and short-term programs of less than 500 hours duration.

Enrollments in both postsecondary and adult programs are growing much faster than enrollments in secondary programs, and together they comprise 40 percent of the total enrollment and 60 percent of the occupationally specific enrollment. It is worth noting here again that the set aside for these programs is only required to be 15 percent. Short-term adult programs make up the largest part of the adult enrollment, and sometimes even of the total enrollment. More than half of the total State enrollment is in short-term adult programs in, for example, Minnesota and Iowa. Table III-3 summarizes the enrollments.

Another way of looking at enrollments, that has implications for the Federal formula for allocating funds, is in relation to the population of the States. The proportion of States' populations that was enrolled in all vocational education varied from 42 per 1000 to 128 per thousand. The differences could be attributed to the strength of vocational education in a particular State or to the number of programs offered, or it could simply say something about the length of the programs. Again, adult programs are generally shorter and less expensive than other programs; therefore, they can serve more students. Even more striking are the differences among States in postsecondary and adult enrollment with respect to the States' population--it ranges from 4 per 1000 to 75 per 1000, and is very likely indicative of State policies that encourage or discourage postsecondary and adult programs. Similarly, the range of secondary enrollments as related to States' populations, which varies from less than 2 per 1000 to 86 per 1000, may be attributable to the extent to which States support less intensive programs such as industrial arts or consumer and homemaking education.

Under the Federal formula, funds are distributed to the States on the basis of population, with about half of the funds being allotted in proportion to the out-of-school age population. The set aside for postsecondary and adult students originally was intended to stimulate the growth of programs for adults, and thus it is important to examine how States in fact did distribute their funds by level of education.

The VEA funds that were spent on postsecondary and adult programs across the Nation in fiscal year 1979 actually were higher than the

TABLE III-3

PERCENT DISTRIBUTION OF VOCATIONAL STUDENTS BY SECONDARY, POSTSECONDARY, AND ADULT PROGRAMS IN STATES AND TERRITORIES, FY 1979

State	Secondary Below Grade 11	Secondary Grades 11-12	Post Secondary	Adult Long-term	Adult Short-term
Ala.	29.0	31.6	11.4	5.7	22.3
Ak.	37.5	34.2	8.0	13.4	6.9
Am. Sam.	44.7	34.9	19.0	1.4	6.0
Ariz.	34.5	36.7	0.0	0.0	28.7
Ark.	25.2	46.5	0.4	6.1	21.8
Calif.	19.7	30.5	28.9	10.6	10.3
N. Mar.	85.4	14.6	0.0	0.0	0.0
Colo.	13.6	33.9	13.2	18.4	20.9
Conn.	57.7	30.0	4.9	3.2	4.3
Del.	42.3	19.1	9.9	7.1	16.6
D.C.	40.8	48.9	2.6	4.2	3.5
Fla.	38.6	21.4	5.5	8.7	25.8
Ga.	51.1	28.2	8.5	0.4	11.7
Guam	52.9	25.8	4.9	8.5	7.8
Hawaii	18.1	44.7	16.3	6.9	14.1
Idaho	27.3	37.7	10.5	0.5	24.0
Ill.	31.2	38.1	17.5	4.5	8.8
Ind.	20.1	29.0	17.1	2.8	31.0
Iowa	8.3	19.1	2.9	7.3	62.4
Kan.	23.9	33.5	8.4	12.3	21.9
Ken.	31.6	31.[illegible]	1.5	6.3	29.2
La.	38.6	35.7	0.0	10.5	15.2
Maine	12.0	31.1	2.5	5.4	48.9
Md.	38.2	28.8	15.7	0.0	17.3
Mass.	15.6	67.2	6.8	0.7	9.7
Mich.	13.1	46.7	23.2	3.1	14.0
Minn.	0.0	35.3	8.9	0.0	55.7
Miss.	36.8	27.0	4.0	6.3	26.0
Mo.	0.0	66.3	9.4	8.2	16.1
Neb.	16.7	35.7	15.6	4.2	27.7
Nev.	35.6	37.9	10.9	4.5	11.2
N.H.	30.6	55.1	12.1	1.0	1.2
N.J.	53.7	23.5	4.4	1.3	17.1
N.M.	38.7	36.8	0.1	18.4	5.2
N.Y.	20.1	45.1	9.7	5.6	19.5
N.C.	29.5	15.3	10.6	4.7	40.0
N.D.	18.7	46.3	6.7	4.7	23.5
Ohio	45.2	23.9	2.3	2.9	25.8
Okla.	25.0	21.7	19.8	2.2	31.3
Ore.	15.3	48.9	17.4	4.3	14.1
Penna.	18.4	41.0	9.9	4.0	26.7
P.R.	60.4	20.8	0.1	5.7	12.1
R.I.	24.7	50.3	8.1	0.0	16.9
S.C.	23.1	30.0	13.4	5.8	27.7
S.D.	38.4	40.4	0.0	10.6	10.6
Tenn.	35.5	25.6	10.1	6.8	22.0
Texas	29.8	23.6	14.4	4.6	27.6
Utah	38.0	36.0	22.6	0.1	2.6
Vt.	19.8	39.0	0.0	0.1	40.6
Va.	17.1	43.4	8.0	4.8	26.7
Wash.	0.0	33.3	11.5	14.2	40.9
W. Va.	16.7	33.3	9.2	2.9	38.0
Wisc.	63.0	2.4	7.5	5.3	21.9
Wyo.	40.7	51.8	1.7	0.1	5.1
Trust Terr.	61.4	33.1	5.5	0.0	0.0
U.S.	28.6	31.7	11.6	5.7	22.5

Source: The Vocational Education Data System, 1979

minimum required. Almost 25 percent of the authorized VEA funds went to postsecondary and adult vocational education. There were, however, large differences among States, as is shown in Figure III-2. In fiscal year 1979, 9 States reported spending less than 15 percent of their total allocation on postsecondary and adult vocational education: 15 other States reported outlays totalling more than double their required set aside (see Table III-4). More importantly, the reported Federal expenditures on postsecondary and adult programs are not necessarily indicative of the total expenditures or of State priorities. On the one hand, three of the States that spent below or near the 15 percent still matched the set aside at 24 to 1 or more--as much as 123 to 1 in Delaware. On the other hand, some States that earmarked less than 20 percent of their VEA funds for adult and postsecondary programs--e.g., New Hampshire, Vermont, and Pennsylvania--invested little of their State and local funds in these programs.

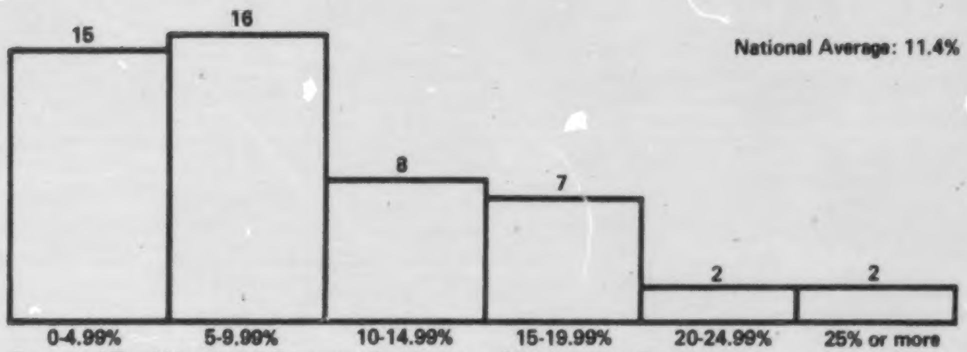
Differences by Community Size

Although there is nothing in the current legislation that requires States to take into account the effects of community size on need in the distribution process, competition for funds among communities is nevertheless a State and local issue. Both large cities and small rural districts claim that their very dense or very sparse respective populations are legitimate indicators of special need.

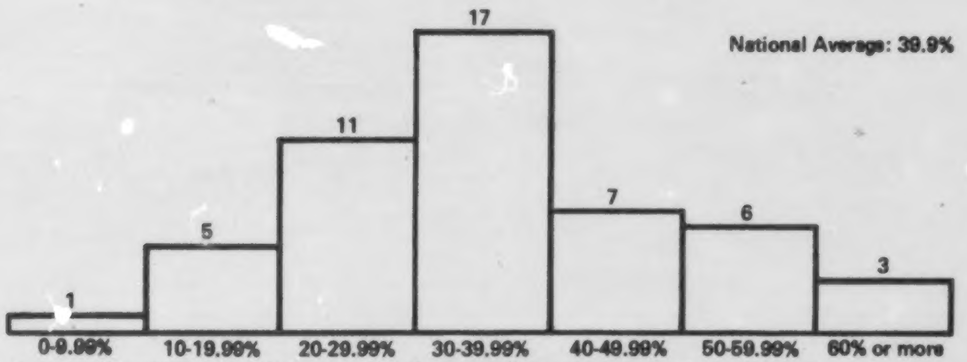
In the past, studies of vocational education based on national data have been unable to distinguish among city, urban, suburban, and rural school districts and thus have not been able to account for differences. The University of California attempted to remedy this by differentiating communities according to size, both to control for community size when analyzing other factors, and to describe the effect of size on enrollments, expenditures, and funding patterns. The districts in each State were classified as largest city, suburban ring of the

FIGURE III-2

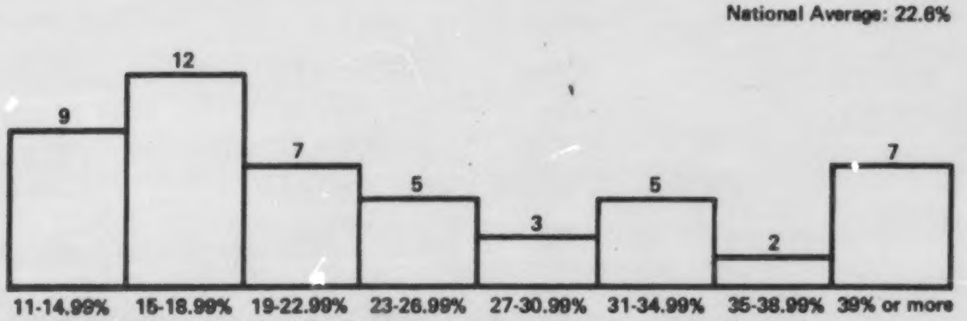
PERCENT ENROLLMENTS AND EXPENDITURES FOR POSTSECONDARY AND ADULT VOCATIONAL EDUCATION PROGRAMS BY NUMBER OF STATES, FY 1979



Percent of Total Vocational Education Enrollments in Postsecondary Programs



Percent of Total Vocational Education Enrollments in Postsecondary and Adult Programs



Percent of Sections 120 & 130 VEA Funds Spent on Postsecondary and Adult Programs

Source: Vocational Education Data System, FY 1979

TABLE III-4

PERCENT OF FEDERAL OUTLAYS[1] ON POSTSECONDARY AND ADULT VOCATIONAL EDUCATION AND THE STATE/LOCAL MATCH RATIO[2]

Less Than 15%	15-20%	20-30%	30-50%	More Than 50%
Ala. (16)	Conn. (11)	Alaska (1)	Calif. (22)	Colo. (5)
Ariz. (13)	Florida (39)	Ark. (7)	Ga. (7)	Iowa (11)
Del. (123)	Indiana (16)	Hawaii (12)	Ill. (16)	Maine (5)
D.C. (3)	Miss. (13)	Idaho (12)	Kansas (10)	
Mass. (24)	Mo. (6)	Ken. (6)	La. (6)	
N.H. (1)	Neb. (17)	Md. (16)	Minn. (13)	
Penn. (4)	Nevada (16)	Mich. (18)	N.M. (4)	
R.I. (10)	N.J. (29)	Ohio (6)	N. Dak. (7)	
Va. (16)	N.Y. (13)	Okla. (22)	S. Dak. (4)	
Wyo. (8)	NC (51)	Oregon (9)	Utah (10)	
	SC (41)	Tenn. (9)	Wash. (21)	
	Vt. (1)	Texas (7)	Wisc. (26)	
		W. Va. (2)		

1. Includes Basic Grant (Section 120) and Program Improvement and Supportive Services (Section 130).

2. The State and local dollars spent for each Federal dollar spent are in parentheses.

Source: The Vocational Education Data System, 1979

largest city, large cities (over 100,000), small cities (10,000-100,000), and rural (less than 10,000).

The reported Federal and State and local expenditures per vocational education enrollee in districts classified by community size are compared to statewide averages in Tables III-5 and III-6. An index with a value well above one indicates a disproportionately high allotment of funds per pupil and an index with a value well below one indicates a disproportionately low per pupil allotment.

The State formulas appear to favor the small cities. (In some of the States small and large cities were combined because the sample

TABLE III-5

INDEX[1] OF DISTRIBUTION OF FEDERAL VOCATIONAL EDUCATION FUNDS BY LOCATION OF LEA IN SELECTED STATES' SECONDARY SCHOOLS, FY 1979

	School Districts				
	Largest City	Suburbs of Largest City	Large Cities	Small Cities	Rural
California	1.17	1.18	1.11	.86	.84
Colorado	1.18	.84	.90	1.17	.99
Florida	.95[2]	-	.85	1.11	1.46
Illinois	.91	1.01	.79	1.19	.81
Kansas	.24	.38	.17	1.61	1.32
New York	1.01	.82	1.42	.87	.82
Oklahoma	1.00	1.03	-	1.32[3]	.94
Pennsylvania	2.06	.72	-	1.28[3]	.75
South Dakota	2.50	.14	-	.90[3]	.82
Texas	1.74	.91	1.18	.91	.77
Utah	.91	.93[4]	-	1.36[3]	1.12
Washington	.61	1.09[4]	-	1.32[3]	0.82

1. Index represents VEA expenditures per pupil in districts classified by size as compared to statewide VEA expenditures per pupil.

2. Includes Miami suburbs.

3. Represents all urban districts except largest city and its suburbs.

4. This reflects all suburban districts and is not limited to largest city.

Source: The Distribution of Federal Funds Under the Vocational Education Act: Interstate and Intrastate Allocations, University of California, 1981

TABLE II

INDEX[1] OF EXPENDITURE OF STATE AND LOCAL VOCATIONAL EDUCATION FUNDS BY LOCATION OF LEA IN SELECTED STATES' SECONDARY DISTRICTS, FY 1979

	School Districts				
	Largest City	Suburbs of Largest City	Large Cities	Small Cities	Rural
California	1.18	.88	1.05	.97	.83
Colorado	.70	.80	1.29	1.05	1.63
Florida	.92[2]	-	.93	1.11	1.07
Illinois	.99	1.10	.93	.96	.85
Kansas	.27	.89	.75	1.38	1.36
Oklahoma	1.07	.94	-	1.68[3]	.93
South Dakota	1.91	.66	-	1.13[3]	.80
Utah	.64	.98[4]	-	.71[3]	1.26
Washington	.81	.95[4]	-	1.12[3]	1.08

1. Index represents reported State and local expenditures per pupil for districts classified by size compared to statewide average expenditures per pupil.

2. Includes Miami suburbs.

3. Represents all urban districts except largest city and its suburbs.

4. Represents all suburban districts.

Source: The Distribution of Federal Funds Under the Vocational Education Act: Interstate and Intrastate Allocations, University of California, 1981

sizes were small.) The effects of formulas for Federal dollars in the largest of the cities in each State are mixed, with seven very near or above the State average and five below. The State and local expenditures in the largest cities, however, are generally low.

Ignoring Sioux Falls as a "largest" city, only Los Angeles has a very high index despite the high costs of education in large cities. Since large city school districts report high per pupil expenditures generally, it appears likely that low indices mean many expenditures are not being reported. The rural districts report low Federal per pupil expenditures. Only 3 of 12 States have indices over 1 for their rural districts, and the highest index, in Florida, is not truly representative. Because the school districts (drawn according to county lines) are so large in that State, most of Florida's rural communities are located within urban districts.

Unfortunately, the real problems faced by the city and rural districts are not apparent in a simple comparison of per pupil expenditures in federally funded programs. Even though the results for the largest cities are mixed, the costs of vocational education per pupil are almost always higher in large city districts. A comparison of unadjusted per pupil expenditures does not reflect differences in the costs needed to provide similar services. Similarly, rural districts are often faced with extra costs due to small class size and isolation, and simple comparisons do not reflect the costs of delivering services. Furthermore, any districts that include both urban and rural communities are classified as urban. Thus, in States with centralized school district organizations, such as Florida or Utah, many of the rural communities are hidden in the "urban" data.

Although there are wide variations in expenditures per pupil among States (see Table III-7), comparisons among States not only are unenlightening but can be misleading. The expenditures per pupil are calculated by simply dividing the total expenditures by the unduplicated enrollment. There are two problems with this approach. First, the enrollments do not represent students enrolled full time (FTE). Therefore, a ninth-grade student just beginning a program in vocational agriculture but only taking one course would be given the same weight as a senior taking a full vocational load at an area center. The expenditures on each are obviously quite different. Since FTE data are not available in most States, enrollments were used. The fact that in Florida the largest proportion (two-thirds) of secondary enrollment is in grades 9 and 10, which includes industrial arts and C&HE, could explain the fact that the per pupil expenditure is the lowest among the States reported.

Second, information on adult students is reported by the institution in which they are enrolled, which could be either a high school (45 percent) or a postsecondary institution (55 percent). Adult students therefore may be included in the secondary enrollment and expenditures.

Distribution of Resources: Services

Expenditures on services are reported to the Department of Education for the activities listed in the Act and for State and local administration. Both Subparts 2 and 3 are reported for each explicitly permitted or mandated activity, as are the set-aside funds used for services for special populations. Thus, data are available on these specific uses only.

In order to supplement what is known about the reported services, the University of California researchers included in their survey of districts and institutions in 10 States questions to illuminate intradistrict differences pertaining to expenditures on sex equity, services for target populations, use of funds to contract with private agencies, and relative use of funds within districts for maintenance, improvements, or expansion of programs.

TABLE III-7

FEDERAL VEA EXPENDITURES, DOLLARS PER PUPIL, FY 1979, BY SIZE OF COMMUNITY

		School Districts				
State	State Average	Largest City	Suburban Ring	Large Cities	Small Cities	Rural
Secondary						
California	21	25	25	24	18	18
Colorado	34	40	28	30	39	34
Florida	11	10	-	9	12	16
Illinois	24	22	24	19	29	19
Kansas	34	8	14	14	56	43
Pennsylvania	81	167	58	-	104	61
South Dakota	39	96	5	-	35	32
Texas	50	88	46	59	46	39
Utah	40	44	36	-	47	46
Washington	20	12	22	-	27	16
Postsecondary						
California	30	28	30	30	29	57
Colorado	100	265	60	99	94	120
Florida	45	36	-	33	55	96
Illinois	35	56	22	16	45	59
Kansas	20	-	5	54	18	18

Source: Data collected by the University of California, 1980

Legislated Activities

The Act requires expenditures on only a few legislated activities: the set asides (one targets levels of education rather than specific services), $50,000 for a sex equity coordinator and programs for displaced homemakers in Subpart 2, and vocational guidance and counseling and the Research Coordinating Unit in Subpart 3. All other specified services in Subpart 2 and 3 are optional, though it is clear that Congress intended that preference be given to those services that improved or expanded programs or access to programs.

The most striking aspect of the reported use of funds for legislated activities is that the bulk of the funds are not targeted to services specifically suggested in the Act, but go primarily for the general support of vocational education programs or to State and local administration. According to fiscal year 1979 VEDS data, 90.8 percent of the Federal Subpart 2 (basic grant) funds were reported as spent on program support and State and local administration, and 92 percent of the State and local funds were reported to have been spent on these same categories. The only other categories in which significant percentages of the Subpart 2 funds were spent were construction (3.0 percent), cooperative programs (2.0 percent), and work-study (1.4 percent). The four categories related to overcoming sex bias and stereotyping only received 1.3 percent of the Federal funds and 0.2 percent of the matching funds. Programs for displaced homemakers, a required expenditure, consumed only 0.5 percent of the Federal funds and virtually none of the matching funds (less than 0.1 percent).

The funds for Program Improvement and Supportive Services, Subpart 3, were more evenly distributed among purposes. Vocational guidance and counseling, for which 20 percent of Subpart 3 is mandated, actually consumed 34 percent of the Federal funds and 68 percent of the State and local funds. Grants to overcome sex bias utilized less than 2 percent of the Federal funds and 0.1 percent of the State and local funds.

There are two reasons for including activities in Subpart 2: to let States know that an activity that might not be interpreted to meet the goals of the Act is in fact permissible (e.g., industrial arts and day care), and to stimulate desired activities (support services for women and cooperative programs). It is clear that the services and activities mentioned in the Act and presumably desired are not always given priority. Of course, the vocational education program funds may include reported expenditures on the target populations as required in Section 110 or they may be going towards program improvement, which is unreported, but they still are fulfilling other purposes of the Act. But few resources were expended on activities specifically introduced to stimulate change; e.g., sex equity provisions, energy programs, and placement services.

Examining the expenditures by State reveals even less attention to the activities listed in the Act than the nationally aggregated data indicate. It shows that expenditures on many of the legislated activities are highly concentrated in a small number of States (see Table III-8). Construction, for example, accounted for about $12 million or 3 percent of the Subpart 2 expenditures in fiscal year 1979. Yet only 13 States reported any Federal expenditures on construction and 4 States--Mississippi, New Jersey, Wisconsin, and Virginia--accounted for three-fourths of those funds. Georgia spent about 90 percent of the total national VEA expenditures on residential schools; New Hampshire and Colorado reported more than 60 percent of all of the Federal VEA expenditures on energy programs; West Virginia and Arizona accounted for 90 percent of the national expenditures for contracted services; the west coast States of California, Oregon, and Washington accounted for two-thirds of the VEA expenditures on support services for women; Texas and Wisconsin accounted for more than half of the VEA expenditures on day care reported; and five states--California, New York, Missouri, Washington, and Massachusetts--spent nearly 60 percent of all the VEA funds reported for progrgams for displaced homemakers.

TABLE III-8

STATES REPORTING VEA EXPENDITURES BY LEGISLATED ACTIVITY
SUBPART 2, FY 1979

Activity	Number of States with Some Reported Federal Expenditures
Vocational education programs	50
Sex equity personnel	50[1]
Displaced homemakers	42[2]
State administrators	49
Work-study[3]	35
Cooperative programs[3]	33
Energy education	12
Construction	13
Stipends	1
Placement services	5
Industrial arts	15
Support services for women	12
Day care	9
Residential schools[3]	2
Contracted instructors	5
Local administration	20

1. Although all reported some VEA expenditures, 24 States spent less than the required $50,000.

2. West Virginia was included as "no expenditure" even though it reported 1 dollar.

3. Activities categorically funded prior to the 1976 amendments.

Source: The Vocational Education Data System, 1979

Subpart 3 expenditures exhibited similar patterns. Although all States spent funds on vocational guidance and counseling, 20 did not fund curriculum development and 15 did not fund research. Only 25 States spent any funds on grants to overcome sex bias, and 6 States--California, Maryland, Minnesota, Missouri, New York, and New Jersey--accounted for more than 80 percent of the total.

One of the changes in 1976 was the consolidation of many activities that had been categorically funded into a form of block grant to give States more flexibility. It is obvious from the large number of States choosing not to fund these activities (see Table III-8) that State priorities are not always the same as national priorities. No expenditures for cooperative programs were reported in 18 states, and no expenditures for work-study were reported in 16 States. In fact, for these two activities, not only does the Act eliminate the categorical grants that were in the 1968 legislation, but it also adds a disincentive--it specifies two additional criteria for the distribution of funds to districts: school dropout rates and rates of youth unemployment. When activities carry with them burdensome requirements, some States may prefer to fund them out of State and local money rather than have to devise another funding scheme. For example, all States reported enrollments in cooperative education programs, indicating that they did fund programs through non-Federal and nonreported vocational education program funds. Thus they avoided the added constraints on the distribution or use of Federal funds.

Services for the Handicapped, Disadvantaged, and Limited English-Proficient

The funds that are set aside for the handicapped, the disadvantaged, and the limited English-proficient are earmarked for special costs that are incurred because of the students' particular handicaps. Like many of the legislated services described in the preceding section there are strings attached to the funds--in their use, in the reporting requirements, and in the accountability. State-aggregated data fail to show how the law affects how students are served. Although special interest groups generally desire mainstreaming for handicapped and disadvantaged students, the law is interpreted in such a way that segregating students in special classes is encouraged. In segregated classes, all costs are considered "excess;" for mainstreamed students, only special services are considered "excess." The 10-State survey asked districts whether they enrolled target populations regardless of whether they reported excess costs and it asked who were mainstreamed and who were not.

Aggregating the information for the 10 States shows that set-aside funds were not used uniformly but were concentrated among a minority of the recipients. In fiscal year 1979 about one in five secondary districts and about one in three postsecondary institutions incurred excess costs for the disadvantaged and handicapped. Only 1 in 20 secondary and 1 in 5 postsecondary districts offered programs incurring extra costs for the limited English-proficient.

These data should not be interpreted to mean that only those districts reporting excess costs actually served students with special needs. The study survey in the 10 States tried to determine the actual enrollments independent of the "excess cost" restriction. Table III-9 shows how few districts that claimed to be mainstreaming handicapped and disadvantaged students were reporting excess costs as defined by the Act. At the secondary level, in 9 of the 10 States, less than half of the districts that mainstreamed special populations were reporting excess costs. In fact, for the 10 States in total, 64 percent of the secondary districts and 80 percent of the postsecondary institutions said that handicapped and disadvantaged students were enrolled in their programs. Either many did not provide special services or many districts simply did not have financial reporting systems that were set up track the excess costs or the system to provide the accountability required.

TABLE III-9

PERCENT OF DISTRICTS IN 10 STATES THAT MAINSTREAM SPECIAL POPULATIONS AND ALSO REPORT EXCESS COSTS, FY 1980

	Secondary		Postsecondary and Adult	
State	Handicapped	Disadvantaged[1]	Handicapped	Disadvantaged[1]
California	43	41	88	71
Colorado	25	22	75	64
Florida	25	20	65	55
Illinois	37	43	100	83
Kansas	33	14	33	33
Massachusetts	41	32	0	33
New York	28	15	13	18
North Carolina	50	54	42	39
South Dakota	23	5	33	67
Texas	27	24	70	58

1. The disadvantaged students may be either academically or economically disadvantaged, since the reporting systems do not distinguish between them.

Source: Survey data, University of California, 1980

Disaggregating the survey information further reveals significant variations among communities of different sizes. Each of the largest cities in each State, and over half of the other cities of over 100,000, had programs for the handicapped, but only 10 percent of the rural districts had such programs.

The reported expenditures per pupil differed greatly between mainstreamed and segregated students. The median cost for a mainstreamed handicapped student in fiscal year 1979 was $375, while the median cost for a segregated student was $833. For postsecondary institutions, the median costs were $455 to $1,070, respectively.

Services to Promote Sex Equity

As was pointed out in a preceding section, few States reported any significant expenditures on activities to overcome sex bias and sex stereotyping, even though such a direction was obviously one of the goals of the 1976 amendments. True progress towards sex equity, however, cannot be measured by VEA expenditures alone, since many changes require more a change in attitudes than a recommended set of activities. Examining VEA expenditures on sex equity is indicative only of special efforts. To find out more about what districts and States report doing for sex equity, questions were included in the 10-State survey to assess change (see Table III-10).

TABLE III-10

PERCENT OF DISTRICTS SURVEYED REPORTING EXPENDITURES TO PROMOTE SEX EQUITY, FY 1980

	Secondary		Postsecondary	
	Responses	Percentage	Responses	Percentage
California	15	47	18	83
Colorado	39	10	12	33
Florida	18	39	23	30
Illinois	109	14	23	22
Kansas	40	10	14	21
Massachusetts	36	44	10	40
New York	86	10	59	49
North Carolina	28	29	29	28
South Dakota	32	9	3	100
Texas	91	21	14	29
TOTAL	554	22	205	40

Source: Survey data, University of California, 1980

Each district was asked whether any funds were spent on activities to promote sex equity and whether any teachers had been hired or reassigned to nontraditional classes. The assumption is that teachers as nontraditional role models play a large part in promoting sex equity. Only 22 percent of secondary districts and 40 percent of postsecondary districts said they spent any (Federal, State, or local) dollars on activities to promote sex equity. The differences among strata (size of community) and among States was striking. Over half of the large cities said they spent funds on such activities, but only 1 in 10 rural communities spent funds on promoting sex equity. Fewer than 10 percent of secondary districts in Colorado, Kansas, New York, and South Dakota spent any funds, but nearly half the districts in California and Massachusetts did.

Even in the districts that did spend money, the level of expenditure was quite low. More than 40 percent of the secondary districts that reported expenditures spent less than $300 in fiscal year 1979. Postsecondary expenditures were higher, with 40 percent spending at least $8,000.

Improvement, Expansion, or Maintenance?

Another element of the survey that is indicative of the types of services provided is the question of how funds are distributed among uses for the maintenance of programs, improvement of programs, addition of new programs, or addition of new services. The legislation clearly intends maintenance to be given a low priority for Federal funds. Since Federal funds cannot be identified at the district level separate and apart from State and local funds, the administrators were asked to estimate how all of their vocational education funds were used. More than 400 secondary districts and more than 170 postsecondary districts responded with estimates.

Among secondary districts, the use of funds was overwhelmingly for program maintenance, which is not surprising. Programs remain more alike from year to year than different, and they cannot be completely revamped each year. Consequently, the expenditures on new programs and services were much lower than expenditures on program maintenance. Seventy-four percent of the LEAs spent nothing on new programs and 90 percent spent less than 5 percent of their budget for new services; 25 percent of the LEAs spent nothing on program improvement and 69 percent spent less than 10 percent on program improvement.

Postsecondary district data indicated the use of vocational education funds more in the spirit of the law, but more than half still devoted at least 90 percent of their budget to program maintenance. Sixty-three percent spent no more than 2 percent of their budget on adding new programs; 71 percent spent no more than 2 percent of their budget on adding new services; 17 percent spent no more than 2 percent in program improvement; and 69 percent spent no more than 10 percent on program improvement.

These data are estimated and based on a sample and therefore may be subject to error. However, it is safe to conclude that relatively few vocational education dollars are going to update curriculum and improve programs. Since the bulk of the education budget goes into instructional and administrative salaries and facilities, this fact is not shocking. Only a small part of the budget is available for program improvement.

Distribution of Resources: Target Populations

Special populations are not required to be factored into the distribution of VEA funds, but they are targeted for extra resources that must be purchased with a minimum percentage of the funds. Since constraints are placed on the use of these funds, many States choose to include concentrations of target populations in their formulas for distributing funds. Two questions are addressed here: First, to what extent are States making use of Federal and State or local funds to purchase services for the special needs populations? Second, are the VEA and other vocational education funds being allocated to districts with the greatest need based on their concentrations of special populations? In other words, do districts with high concentrations of special populations show high per pupil expenditures of Federal funds, indicating that special compensatory services are being provided? States do not report their expenditures of set-aside funds by district; high total expenditures do not guarantee that funds are being spent on those targeted, but they are indicative of the effects of target mechanisms.

The VEA, in Section 110, requires that a minimum of 10 percent and 20 percent of Section 102(a) funds must be spent on up to 50 percent of the costs of serving the handicapped and the disadvantaged, including the limited English-proficient (LEP), respectively. The regulations further restrict the expenditures to excess costs, defined as the total costs of vocational education for those in special classes, and as the costs over and above the average per pupil costs for those mainstreamed in regular classes.

The VEDS reported for fiscal year 1979 both the Federal and the State and local outlays for the handicapped and disadvantaged and LEP, and the number who were enrolled in programs that used Federal dollars for special services. Therefore the reported enrollments and expenditure data include only those districts that could show actual expenditures of the Federal funds on special services.

The enrollments of handicapped students that were reported to VEDS as benefiting from the set-aside funds for fiscal year 1979 vary from virtually none (45 students enrolled) in Alaska to 5 percent of the vocational education enrollment in Rhode Island. The national average enrollment, based on VEDS, was 1.8 percent. (The Office for Civil Rights survey, which was not limited only to those benefiting from special services, showed 2.6 percent of all vocational education students as handicapped.) Eight States reported less than 1 percent of the enrollment as handicapped beneficiaries of the set asides, while eight others reported more than 3 percent. The enrollments of disadvantaged and handicapped dropped 80 percent and 50 percent, respectively, from fiscal year 1978 reported enrollments, reflecting the limitations of restricting the reporting to "beneficiaries" of set asides. Even using the most liberal estimates based on the University of California survey (about double the VEDS counts), the proportion of handicapped enrolled in vocational education programs falls far below 8 percent, the proportion of handicapped estimated to be in the total school population.[2]

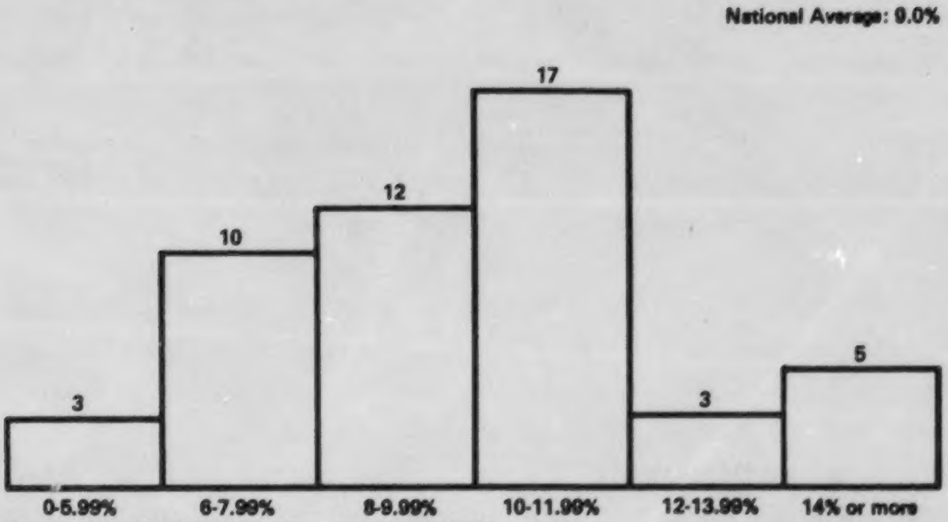
The reported expenditures on the handicapped also varied widely among States: 22 spent less than the 10 percent set aside, but 5 other States spent more than 14 percent--40 percent more than required (see Figure III-3). The expenditures appear to bear little relationship to the percentages of handicapped enrolled in programs, indicating that if the expenditure data are relatively accurate, there are large differences among States in the excess costs of services and quite possibly in the kinds of services purchased. Alaska and Florida, for instance, reported more than 15 percent spent on the handicapped but show less than 1 percent of their enrollment as handicapped. Hawaii reported the second highest rate of enrollment of handicapped students in the Nation, but reported only 8 percent spent on those students.

The State and local match, which must be at least 1 State or local dollar for every Federal dollar, fluctuated greatly among the States. Four States--Louisiana, North Carolina, Oklahoma, and Oregon--reported less than the mandated match, the large majority of the States matched somewhere between 1 to 1 and 2 to 1, and four States--Rhode Island, Delaware, Vermont, and Illinois--had matching ratios on the order of 10 to 1.

The enrollments of the disadvantaged vary even more than the enrollments of the handicapped, ranging from 2 percent of the total State

FIGURE III-3

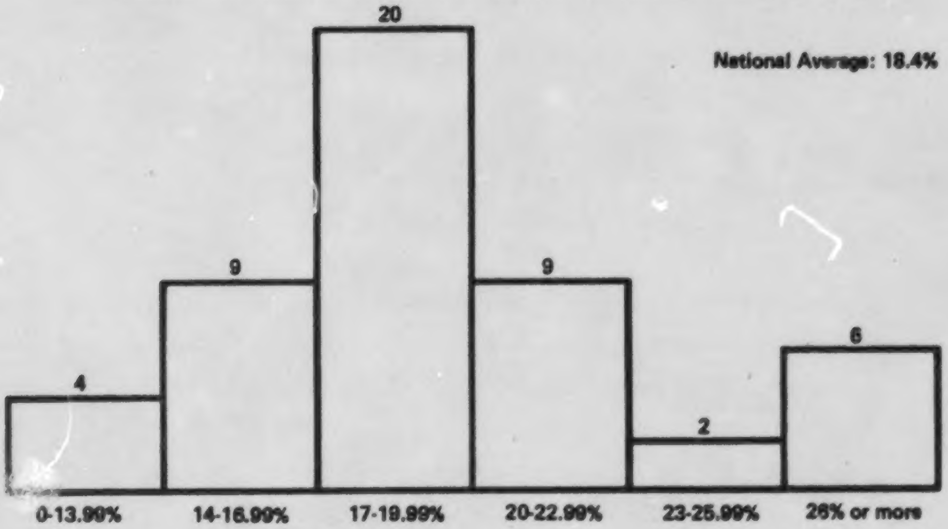
PERCENT OF SECTIONS 120 & 130 VEA FUNDS SPENT BY STATES
ON SPECIAL SERVICES FOR HANDICAPPED BY NUMBER OF STATES, FY 1979



Source: Vocational Education Data System, FY 1979

FIGURE III-4

PERCENT OF SECTIONS 120 & 130 VEA FUNDS SPENT BY STATES
ON SPECIAL SERVICES FOR DISADVANTAGED BY NUMBER OF STATES, FY 1979



Source: Vocational Education Data System, FY 1979

vocational education enrollment in New Hampshire to 33 percent in Hawaii. The distribution is shown in Figure III-3. Eleven States reported less than 4 percent of their enrollment as disadvantaged, while 10 other States reported more than 12 percent of their enrollment as disadvantaged. In 14 States, the percent of disadvantaged students in vocational education was compared to the proportion of children from families below the poverty line (see Table III-11). The numbers suggest enrollments below what would be expected by the percent of children below poverty. If the potential academically disadvantaged were included, the ratios would be even lower.

The reported expenditures on special services for the disadvantaged and LEP varied from a low of 9 percent in Kansas to a high of 34 percent in Illinois (see Figure III-3). The State and local match was, in most States, between 1 and 2 dollars of State and local money for every dollar of Federal money. There were some notable exceptions, however. Four States--Missouri, Oregon, Vermont, and West Virginia--did not match every dollar of Federal money with a dollar of State or local money; four other States--Delaware, Florida, New Mexico, and New York --matched by more than 10 to 1.

For both the handicapped and the disadvantaged, there seems to be little relationship between the effort to spend the set-aside Federal funds and State and local efforts to provide services. Many of the States with the very high State- and local-to-Federal matches, did not spend their set-aside share of the VEA money.

This brief analysis describes trends in States and shows relative differences among States, but it must be interpreted with caution. The VEDS enrollment data were limited to students enrolled in districts receiving VEA funds and who incurred costs for special services. Expenditure data cannot be evaluated precisely in terms of outlays because States are allowed to carry over expenditures to following years.

The University of California survey showed that many districts that actually enrolled and educated handicapped and disadvantaged students do not bother to use the funds set aside because of the difficulties in maintaining records of the special services, with the result that the VEDS figures were low.

TABLE III-11

ESTIMATES OF THE REPRESENTATION OF DISADVANTAGED STUDENTS IN VOCATIONAL EDUCATION

State	(1) Percent Children Below Poverty Level	(2) Percent Disadvantaged Students in Voc. Ed.	Ratio of (2) to (1)
California	13.8	9.0	.65
Colorado	10.7	5.1	.48
Florida	21.6	3.5	.16
Illinois	15.1	15.8	1.05
Kansas	8.6	4.5	.52
Massachusetts	9.3	2.7	.29
New Hampshire	10.3	2.3	.22
New York	13.1	6.0	.46
North Carolina	17.8	10.7	.60
Oklahoma	14.6	3.8	.26
Pennsylvania	12.6	4.3	.34
South Dakota	13.1	6.3	.48
Texas	20.5	4.4	.21
Utah	8.0	4.7	.59

Source: The Distribution of Federal Funds Under the Vocational Education Act: Interstate and Intrastate Allocations, Unversity of California, 1981

The Effects of Concentrations of Target Populations on State Allocations

The 1976 Act, it will be recalled, does not require States specifically to distribute funds to districts on the basis of concentration of target populations; it requires only that the States use specified portions of the funds for target populations. Nevertheless, many States did use concentration of target populations as a factor for distributing all or part of their funds. Therefore one might expect the resulting Federal expenditures to bear some relationship to the concentration. This factor was included in the analysis of the consequences of the formula.

The two procedures used to analyze the distribution of resources to districts in terms of target populations were described more fully in Chapter II. First, districts within States were ranked according to the estimates of concentration of target populations and arranged in quartiles--high, mid-high, mid-low, and low. The expenditures per pupil were compared for the four quartiles. This procedure provides an estimate of the simple association of expenditures and concentration of target populations. Second, the independent effect of percentages of target populations enrolled on Federal expenditures per pupil was evaluated by multiple regression analysis,[3] which measures the change in the allocation occurring when the concentration of target population is changed, assuming other variables (e.g., tax wealth, unemployment rates, concentration of poverty) are held constant.

Examining the data in States ranked in quartiles according to the concentrations of target populations reveals that expenditures of VEA funds per pupil were high in those districts with high concentrations of disadvantaged and handicapped students. In order to make the comparison easier, the numbers presented in Tables III-12 and III-13 are indices derived by dividing the quartile's expenditures per pupil by the statewide average. Thus indices over 1 indicate higher than average expenditures, and indices under 1 indicate lower than average expenditures.

TABLE III-12

INDEX[1] OF DISTRIBUTION OF FEDERAL AND STATE AND LOCAL FUNDS IN SECONDARY SCHOOL DISTRICTS CLASSIFIED BY PROPORTIONS OF VOCATIONAL EDUCATION STUDENTS WHO ARE HANDICAPPED, FY 1979

	Largest City	Quartiles[2]			
		Low	Low-Mid	High-Mid	High
Federal VEA Funds					
California	1.16	.74	.86	1.24	--[3]
Colorado	1.31	.85	1.15	.60	1.36
Florida	.95	1.17	.82	.88	1.27
Illinois	.92	.73	.97	1.28	1.17
Kansas	.23	.95	2.03	1.39	.41
Pennsylvania	2.20	.67	.73	1.02	2.20
South Dakota	2.47	2.88	.50	1.90	--[3]
Texas	1.74	.84	.98	.81	1.22
State and Local Funds					
California	1.18	1.64	.73	.86	--[3]
Colorado	.71	1.42	1.03	.71	1.30
Florida	.92	1.08	.89	.96	1.22
Illinois	.98	.82	1.09	.98	1.21
Kansas	.27	1.19	1.58	1.51	.62
South Dakota	1.92	.80	.67	1.23	1.22

1. Index represents expenditures per student in quartile compared to statewide average expenditure per student.

2. First quartile, "low," includes the 25 percent of the enrollment in districts with the lowest concentration of handicapped students, next quartile, "low-mid," includes the 25 percent of the enrollment in districts with the next lowest concentration of handicapped students, etc.

3. In these States there was too little difference between the expenditures per pupil, so they were grouped into three distinct categories, not four.

Source: Data collected from States by the University of California, 1980

TABLE III-13

INDEX[1] OF DISTRIBUTION OF FEDERAL AND STATE AND LOCAL FUNDS IN SECONDARY SCHOOL DISTRICTS CLASSIFIED BY PROPORTIONS OF VOCATIONAL EDUCATION STUDENTS WHO ARE DISADVANTAGED, FY 1979

	Largest City	Quartiles[2]			
		Low	Low-Mid	High-Mid	High
Federal VEA Funds					
Colorado	1.31	.64	.59	1.11	1.54
Florida	.95	1.23	.78	1.05	1.02
Illinois	.92	.64	.99	1.02	1.45
Kansas	.23	.32	.75	1.39	1.99
Pennsylvania	2.20	.57	.70	1.12	2.21
South Dakota	2.47	.42	.84	.35	1.53
Texas	1.74	.76	1.00	.99	1.11
State and Local Funds					
Colorado	.71	1.07	1.12	.84	1.32
Florida	.92	1.16	.92	1.10	.93
Illinois	.98	.88	1.04	1.03	1.08
Kansas	.27	.96	1.09	1.19	1.68
South Dakota	1.92	.84	1.26	.65	.87

1. Index represents expenditures per student in quartile compared to statewide average expenditure per student.

2. First quartile, "low," includes the 25 percent of the enrollment in districts with the lowest concentration of disadvantaged students, next quartile, "low-mid," includes the 25 percent of the enrollment in districts with the next lowest concentration of disadvantaged students, etc.

Source: Data collected from States by the University of California, 1980

Kansas was the only State examined in which both the VEA and the State and local expenditures were below average for secondary districts with high concentrations of handicapped students. In five of the eight States, expenditures per pupil in the districts with high-mid concentrations of handicapped were also higher than average.

Six of seven States examined showed high VEA expenditures in districts with high concentrations of disadvantaged students. Florida was the only anomaly. In five of the States the expenditures per pupil in high concentration districts were at least 40 percent above the statewide average. In six States, the districts in the high-mid quartile also showed higher than average expenditures. High State and local expenditures, however, did not follow consistently the concentration of disadvantaged students. The patterns of expenditures of State and local funds were much more random with respect to concentrations of special need students.

In the States in which the independent effect of the concentration of disadvantaged was tested at the secondary level, three--Illinois, Oklahoma, and Pennsylvania--showed statistically significant effects of concentration of disadvantaged on total Federal expenditures per pupil (see Table III-14). In the other five States there was no significant effect.

Three States, California, Illinois, and New York, showed significant effects of concentrations of handicapped on expenditures per pupil. In the other six States, the target population showed no independent effect on the distribution of funds. Since the proportion of funds set aside for LEP is small, the effects were not tested.

This analysis indicates that with the current funding procedures, even without specifically targeting the distribution of funds to special populations, Federal dollars would flow preferentially to those

TABLE III-14

EFFECT OF CONCENTRATION OF DISADVANTAGED AND HANDICAPPED STUDENTS ON VEA EXPENDITURES IN SECONDARY SCHOOL DISTRICTS, FY 1979

State	Disadvantaged	Handicapped
	Independent[1] Effect	Independent[1] Effect
California	NA	+***
Colorado	None	None
Florida	None	None
New York	None	+***
Illinois	+*	+*
Oklahoma	+***	None
Pennsylvania	+*	None
South Dakota	None	None
Texas	None	None

* Significant at $p < 0.05$
** Significant at $p \leq 0.01$
*** Significant at $p \leq 0.001$

1. The independent effect is the regression coefficient, which measures the change in the allocation resulting from a change in one item, with all other items held constant.

Source: The Distribution of Federal Funds Under the Vocational Education Act: Interstate and Intrastate Allocations, University of California, 1981

districts with the highest concentrations of disadvantaged and handicapped. This analysis indicates how funds are distributed to districts with respect to aggregate need, not on whom they are spent or how.

Though most of the attention on services for the special populations has been at the classroom level, the set asides also apply to Subpart 3 funds, Program Improvement and Supportive Services. Thus, the intent of the Act is for Subpart 3 funds, such as those for research and curriculum development, to be used also for special services for the targeted populations at the State level. For the United States as a whole, the SEAs reported spending the following percentages of Federal funds as set asides for excess costs, in each of the legislated activities: Guidance and Counseling, 5 percent; Pre- and Inservice Training, 10 percent; Curriculum Development, 23 percent; Research, 25 percent; Exemplary Programs, 10 percent.[4] In no case was the expenditure near the 30 percent (handicapped plus disadvantaged set asides) that applies to the Section 102(a) funds. Furthermore, the States did not match Federal set-aside dollars, spending only 1 State or local dollar for every 5 Federal dollars.

Differences among individual States were even more striking. California accounted for nearly half of the State funds used for target populations. Twenty-six States and all of the territories reported no expenditures out of Subpart 3 outlays specifically targeted to the handicapped and disadvantaged and limited English-proficient for fiscal year 1979. Therefore the burden fell on the local education agencies to make up the difference. The full set asides had to come out of what was distributed to the districts, which meant that their effective percent set asides were actually 25 percent higher (the ratio of Subpart 3 funds to Subpart 2 funds) and effectively comprised 25 and 12.5 percent of their grants, not 20 and 10 percent.

Distribution of Resources: Occupations

The distribution of resources according to the occupations for which training is offered cannot be described directly. In most States vocational education dollars are not accounted for by occupational program, and thus there are no data to analyze the flow of funds to programs in fiscal year 1979. Programs for different occupations may require very different per pupil expenditures, yet most States distribute funds to eligible recipients on the basis of a straight formula disbursement, which is independent of the differences in costs associated with training for different occupations. In those States that use a cost reimbursement rate method, the occupational program costs are automatically taken into account in the recipients' expenditures.

Despite the lack of program cost accounting data, information about the use and thus distribution of resources for occupations can be inferred. Most useful for this reference point are (1) the total enrollments in each of the various occupational programs, (2) the patterns of enrollments by race, sex, ethnicity, and target population, and (3) the patterns of enrollment according to the expected wages and employment opportunities of the occupations.

Enrollment by Occupation

Although the total enrollment in vocational education in fiscal year 1979, including those in short-term adult programs, was 17.0 million, only 45 percent of the students were in occupationally specific programs--those concentrating on a given field in sufficient depth to be deemed preparation for employment in that field.

The proportion of students in occupationally specific programs varied considerably by level of education. Secondary programs, because of the relative importance of C&HE and indistrial arts, and because of the VEDS reporting procedure which counts all students below the 11th grade as being in non-occupationally specific programs, have the lowest proportion of occupationally specific enrollment. Postsecondary programs have the highest proportion (see Table III-15).

TABLE III-15

PERCENT OF TOTAL ENROLLMENT IN OCCUPATIONALLY SPECIFIC PROGRAMS

Level of Education	Percent
Secondary	29.5
Postsecondary	92.0
Adult, long term	87.5
Adult, short term	51.0

Source: The Vocational Education Data System, 1979

The numbers enrolled in occupationally specific programs also varied among States, suggesting different priorities in the use of Federal funds. The States with the highest proportion of students in specific job preparation (over 70 percent) were Maine, Minnesota, and Washington. The States with the lowest percentage (less than 20 percent) were Arizona, Iowa, New Jersey, Wisconsin, and Wyoming.

The VEDS describes enrollments in more than 120 different occupational programs by secondary, postsecondary, and adult enrollment. An examination of the relative size of the secondary enrollments, however, reveals that about one-third of the students are concentrated in only six occupational programs: Agricultural Production; General Merchandising; Accounting and Computing Occupations; Filing, Office Machines, and General Office; Stenography, Secretarial, and Related Occupations; and Auto Mechanics. These are among the more traditional vocational education programs--office occupations, vocational agriculture, and the ever-popular auto mechanics. It does not mean, however, that programs for newer occupations are not increasing. It is more likely that the six programs are simply those that are more commonly offered, since the skills (with the exception of agricultural production) are not location-specific.

In the postsecondary enrollment there is also a concentration: about one third of the enrollees are still in six programs, but the dominant programs are different. The most common postsecondary programs are Real Estate; Nursing; Supervisory and Administrative Management; Electronic Technology; Accounting and Computing Operations; and Stenographic, Secretarial, and Related Occupations. Given the titles used, these programs appear to be more technical than secondary programs and associated with new and emerging occupational needs.

Of the short-term adult programs, Fireman Training (frequently for volunteer departments in rural areas) dominated the enrollments, with Office Occupations the next most popular.

The University of California analyzed enrollments by occupation based on data from four States, California, Illinois, Florida, and Colorado. At the secondary level there was some deviation from the national enrollment patterns, but all had very heavy enrollments in the office occupations programs. In each State there was at least one occupational home economics program with a very high enrollment, but it was not the same program in each State.

Enrollment by Sex, Race, Ethnicity, and Special Need

The six programs that had the greatest concentration at the secondary level had predominantly female enrollment. Because women are much more concentrated in a small number of programs than men are, either women have been offered more limited opportunities or fewer women are taking advantage of the complete range of opportunities.

There were more differences in programs at the postsecondary level in the four states than at the secondary level. In California the most popular programs among women were Real Estate and Accounting; in Illinois they were Nursing and Bookkeeping; in Colorado they were Supervisory and Administrative Management and Accounting; and in Florida they were Nursing and Administration, followed by Law Enforcement.

In the four States there were no discernible patterns in enrollments by race or ethnicity, as there was for sex. A simple program-by-program comparison by race or ethnicity would be irrelevant because, unlike women or handicapped populations, the proportions of blacks or Hispanics are not uniform across the country. One would not expect, for example, to find a large number of blacks in vocational agriculture simply because these programs tend to be strongest in States with relatively small minority populations. Further, due to the small number of enrollees for some ethnic groups and some targeted populations, percentages are less descriptive and more susceptible to statistical error. Therefore, a more appropriate question when looking at enrollments is whether there are any differentials by race, ethnicity, and sex in terms of the employment opportunities for which the training is directed.

The Economic Potential of the Programs: Who Is Prepared for the "Better" Jobs?

The University of California created two measures of the economic potential of the occupational program: (1) the relative ranking of expected wages of the occupations for which the training is intended, and (2) the relative ranking of the expected employment opportunities of the occupations for which the training is intended. The precise methodology is described in Appendix F. The California researchers then ranked all occupational programs for which employment data were available according to the two measures and for each measure divided them into high, mid-high, mid-low, and low quartiles. The high quartile for the first measure, for example, contained the programs with the 25 percent of the enrollments that could expect the highest wages. The enrollments in each quartile were then analyzed with respect to characteristics of those enrolled, e.g., sex, race, ethnicity, and special need, for both secondary and postsecondary programs.

Expected Wages

As Tables III-16 and III-17 show, the most striking pattern in enrollment in terms of expected wages is that women are predominantly in low-wage programs. In secondary programs, nearly 70 percent of the women were in the below-average wage occupations, and less than 10 percent were enrolled in programs leading to highest-wage jobs. In postsecondary programs, it was only slightly less striking; about 60 percent were in below-average wage programs and about 12 percent were in the highest-wage programs. Of the men, however, only about 14 percent and 15 percent, respectively, were enrolled in secondary and postsecondary programs for low-wage jobs, and more than 40 percent and about 35 percent were in programs expected to lead to highest-wage jobs.

The patterns by race and ethnicity were less pronounced. In two States, Colorado and Florida, blacks were much less likely to be trained for high-wage jobs and much more likely to be trained for low-wage jobs than non-Hispanic whites at the secondary level. In Illinois the same pattern emerged, but it was less pronounced. In California, however, blacks were more heavily enrolled in secondary programs for high-wage jobs than were non-Hispanic whites. Hispanics seemed as well represented as non-Hispanic whites in all four States, in both secondary and postsecondary programs.

TABLE III-16

ANALYSIS OF PERCENT PARTICIPATION OF ETHNIC/SEX GROUPS IN VOCATIONAL PROGRAMS CLASSIFIED BY PROGRAM WAGE INDICATOR, SECONDARY LEVEL (11TH & 12TH GRADE), FY 1979

State	Enroll.	Male	Female	White	Black	Hisp.	Asian	Native Amer.
California								
Low	25.8	13.3	35.7	25.8	22.7	27.1	26.5	31.0
Mid-low	27.2	16.8	35.4	27.9	25.1	24.3	35.9	28.3
Mid-high	26.1	27.1	25.2	27.5	22.4	24.0	22.7	25.0
High	21.0	42.8	3.7	18.9	29.8	24.6	14.9	15.8
TOTAL	277,743	122,830	154,913	79,715	30,521	54,647	11,339	1,521
Colorado								
Low	28.8	11.3	42.7	28.6	31.2	30.0	21.6	23.6
Mid-low	18.4	13.5	22.2	18.4	18.3	18.2	17.5	17.1
Mid-high	27.0	24.3	29.2	26.7	35.7	24.2	41.8	23.8
High	25.8	50.9	5.9	26.3	14.8	27.6	19.0	34.9
TOTAL	40,735	18,008	22,727	31,978	2,436	5,502	416	403
Florida								
Low	26.1	14.6	33.4	23.1	37.2	24.8	22.7	27.2
Mid-low	27.7	18.2	33.7	27.4	25.8	35.0	33.0	25.2
Mid-high	26.0	32.0	22.3	28.1	19.9	23.3	25.0	18.9
High	20.1	35.2	10.6	21.3	17.1	16.9	19.3	28.6
TOTAL	206,767	80,134	126,633	147,412	41,735	16,125	1,286	206
Illinois								
Low	24.9	10.3	39.3	23.9	29.6	23.7	23.5	29.7
Mid-low	25.0	12.3	37.5	24.5	26.1	30.2	24.7	27.0
Mid-high	23.9	34.0	13.9	24.5	21.5	20.9	22.7	18.9
High	26.2	43.4	9.4	27.0	22.8	25.1	29.1	24.3
TOTAL	215,973	107,045	108,928	169,667	37,140	7,709	1,272	185
South Dakota								
Low	9.5	3.2	49.3	-	-	-	-	25.7
Mid-low	61.9	51.5	10.3	-	-	-	-	4.3
Mid-high	21.7	29.3	39.8	-	-	-	-	44.3
High	6.9	16.0	0.6	-	-	-	-	25.7
TOTAL	1,961	1,318	643	-	-	-	-	70

Source: The Distribution of Federal Funds Under the Vocational Education Act: Interstate and Intrastate Allocations, University of California, 1981

TABLE III-17

ANALYSIS OF PERCENT PARTICIPATION OF GROUPS IN VOCATIONAL PROGRAMS CLASSIFIED BY PROGRAM WAGE INDICATOR, POSTSECONDARY LEVEL, FY 1979

State	Enroll.	Male	Female	White	Black	Hisp.	Asian	Native Amer.
California								
Low	31.1	22.3	41.3	30.9	34.9	30.5	29.1	30.5
Mid-low	21.1	20.8	21.6	20.3	21.7	24.9	26.0	21.4
Mid-high	25.7	25.7	25.8	26.8	22.3	20.5	24.2	24.7
High	22.1	31.3	11.4	22.0	21.1	24.0	20.7	23.4
TOTAL	512,069	275,548	236,521	394,741	39,541	48,692	23,837	5,258
Colorado								
Low	23.4	15.0	34.3	23.2	27.6	23.2	24.2	27.4
Mid-low	29.0	32.4	24.6	29.9	19.6	23.7	28.6	25.4
Mid-high	26.5	20.5	34.4	27.1	30.9	19.4	22.8	19.9
High	21.1	32.2	6.7	19.8	21.9	33.7	24.5	27.4
TOTAL	33,210	18,755	14,455	28,594	1,332	2,520	413	351
Florida								
Low	22.3	14.2	29.4	21.5	27.2	19.9	18.5	21.0
Mid-low	23.6	26.7	20.8	22.7	23.7	31.5	35.4	23.5
Mid-high	29.7	22.0	36.5	31.6	23.6	24.6	22.1	29.4
High	24.4	37.1	13.3	24.3	25.5	24.0	24.0	26.1
TOTAL	76,631	35,933	40,698	57,847	12,317	5,486	709	272
Illinois								
Low	23.2	10.6	34.5	21.8	29.9	23.8	24.0	23.0
Mid-low	28.2	35.3	21.8	28.3	27.0	31.1	31.8	30.7
Mid-high	24.6	16.9	31.5	25.2	22.5	21.0	23.0	22.0
High	24.0	37.2	12.3	24.7	20.7	24.1	21.3	24.3
TOTAL	117,070	55.241	61,829	93,165	18,908	3,108	1,407	482

Source: The Distribution of Federal Funds Under the Vocational Education Act: Interstate and Intrastate Allocations, University of California, 1981

The patterns for the target populations are particularly surprising, since one might expect the target populations to be excluded from the programs for the highest paying jobs. In fact, in the three States in which data were analyzed, the handicapped in high schools were enrolled in programs for high-wage jobs at a much higher than average rate (Table III-18). This did not hold at the postsecondary level in the two States examined for which data were available. There the disadvantaged and handicapped were enrolled more heavily in programs preparing for the lowest paying jobs.

The disadvantaged were enrolled in secondary programs for high paying jobs at about the same rate as the total State enrollment, but they also were more heavily enrolled in programs for the low paying jobs, particularly in Florida (50 percent). At the postsecondary level, in the two States examined, they were more likely to be in low expected wage programs.

Expected wages according to the size of the community (Table III-19) indicate no consistent patterns among the five States examined. Los Angeles seems to offer programs for higher-wage jobs than the rest of California, and rural South Dakota offers very few programs leading to high-wage jobs. Otherwise, localities' patterns are relatively similar to State averages.

Employment Opportunities

An examination of programs with respect to the expected employment opportunities yields quite different patterns by sex (see Tables III-20 and III-21). Women are much more concentrated in high opportunity programs at the secondary level in four of the five States, and in three out of four in high opportunity programs at the postsecondary level. Colorado is the only exception to that pattern.

TABLE III-18

ANALYSIS OF PERCENT PARTICIPATION OF TARGET POPULATIONS IN VOCATIONAL PROGRAMS CLASSIFIED BY PROGRAM WAGE INDICATOR, FY 1979

State	Enrollment	Disadvantaged	Handicapped	Limited English-Proficient
Secondary Programs				
Colorado				
Low	34.2	36.0	22.5	15.9
Mid-low	19.7	16.9	14.4	29.6
Mid-high	20.3	26.4	24.8	31.5
High	25.8	20.7	38.4	23.0
Florida				
Low	26.1	49.7	37.9	N/A
Mid-low	27.7	9.3	14.0	
Mid-high	26.0	21.3	19.3	
High	20.1	19.8	28.8	
Illinois				
Low	24.9	28.8	33.9	30.7
Mid-low	25.0	21.5	13.5	17.0
Mid-high	23.9	23.7	24.2	20.6
High	26.2	26.0	28.5	31.8
Postsecondary Programs				
Colorado				
Low	23.4	27.4	48.6	26.0
Mid-low	29.0	32.4	22.9	20.7
Mid-high	26.5	22.4	11.0	36.1
High	21.1	17.8	17.4	17.2
Illinois				
Low	23.2	28.2	28.7	22.5
Mid-low	28.2	35.5	32.9	46.1
Mid-high	24.6	20.8	21.0	12.8
High	24.0	15.5	17.4	18.6

Source: The Distribution of Federal Funds Under the Vocational Education Act: Interstate and Intrastate Allocations, University of California, 1981

TABLE III-19

PARTICIPATION BY STRATA OF VOCATIONAL EDUCATION PROGRAMS CLASSIFIED BY WAGE LEVEL INDICATOR, SECONDARY, FY 1979

State	Rural	Small Cities	Large Cities	Suburban Ring	Largest City	Total
California						
Low	28.58	28.57	30.15	26.23	12.78	25.79
Mid-low	22.25	28.83	34.65	29.09	14.70	27.19
Mid-high	33.51	27.64	21.31	25.84	25.08	26.02
High	15.66	14.96	13.89	18.83	47.43	21.01
Total Number	16,083	117,005	54,084	41,578	48,243	277,743
Colorado						
Low	31.7	20.3	33.4	25.5	21.5	25.8
Mid-low	28.2	34.5	22.1	16.6	38.5	27.0
Mid-high	10.1	15.9	25.9	22.7	15.5	18.4
High	29.9	29.3	18.6	35.2	24.5	28.8
Total Number	6,550	6,484	5,282	13,104	9,315	40,735
Florida						
Low	23.81	25.93	25.89		28.10	26.10
Mid-low	23.98	27.01	26.64		33.50	27.72
Mid-high	31.61	27.49	24.88		22.35	26.05
High	20.60	19.57	22.59		16.05	20.13
Total Number	17,541	81,058	73,281		34,887	206,767
Illinois						
Low	21.92	25.60	19.91	29.18	21.00	24.89
Mid-low	30.05	23.81	23.08	19.58	30.35	24.99
Mid-high	25.14	24.02	25.46	24.62	21.53	23.87
High	22.90	26.58	31.56	26.61	27.12	26.24
Total Number	36,474	56,056	6,430	68,037	48,976	215,973
South Dakota						
Low	.17	5.16		0	7.69	18.31
Mid-low	80.27	35.16		100.00	6.02	37.99
Mid-high	12.94	40.32		0	55.18	32.74
High	6.63	19.35		0	31.10	10.96
Total Number	603	310		64	299	1,961

Source: The Distribution of Federal Funds Under the Vocational Education Act Interstate and Intrastate Allocations, University of California, 1981

TABLE III-20

ANALYSIS OF PERCENT PARTICIPATION OF ETHNIC, RACIAL, AND SEX GROUPS IN VOCATIONAL PROGRAMS CLASSIFIED BY EMPLOYMENT OPPORTUNITY INDICATOR, SECONDARY LEVEL (11TH & 12TH GRADE), FY 1979

State	Enroll.	Male	Female	White	Black	Hisp.	Asian	Native Amer.
California								
Low	11.7	21.5	4.2	11.8	13.6	11.1	9.3	10.8
Mid-low	37.5	45.2	31.6	37.2	35.8	40.1	34.1	39.3
Mid-high	18.7	15.4	21.2	18.8	19.9	17.4	20.3	17.9
High	32.1	17.9	43.0	32.3	30.6	31.5	36.4	32.1
TOTAL	269,610	116,580	153,029	175,625	28,653	52,760	11,081	1,490
Colorado								
Low	33.3	17.2	46.6	33.2	40.6	32.2	40.1	23.8
Mid-low	30.6	53.1	11.9	31.5	17.8	28.0	27.4	35.9
Mid-high	19.3	13.1	24.4	18.8	23.3	21.1	17.4	20.6
High	16.8	16.6	17.0	16.4	18.3	18.7	15.1	19.6
TOTAL	31,238	14,124	17,114	25,357	1,166	4,222	212	281
Florida								
Low	35.7	47.6	28.2	35.2	29.4	33.7	34.0	34.5
Mid-low	18.4	13.8	21.3	16.0	23.5	15.5	12.5	18.7
Mid-high	17.3	21.8	14.5	17.9	13.0	12.7	17.7	24.1
High	28.6	16.9	44.8	31.0	34.1	38.2	35.8	22.7
TOTAL	189,673	73,933	115,740	142,294	40,284	15,744	1,236	203
Illinois								
Low	30.5	53.2	8.9	31.7	25.7	27.4	32.6	27.1
Mid-low	14.4	13.1	15.6	12.3	21.5	25.3	20.4	13.0
Mid-high	26.2	23.1	29.1	24.7	32.1	29.6	26.3	30.5
High	28.9	10.7	46.3	31.3	20.8	17.7	20.7	29.4
TOTAL	208,341	101,671	106,670	163,551	36,091	7,381	1,141	177
South Dakota								
Low	38.4	51.5	10.8	-	-	-	-	4.4
Mid-low	15.0	21.9	0.5	-	-	-	-	7.3
Mid-high	12.9	10.5	18.1	-	-	-	-	33.3
High	33.7	16.1	70.6	-	-	-	-	55.1
TOTAL	1,892	1,284	609	-	3	4	2	69

Source: The Distribution of Federal Funds Under the Vocational Education Act: Interstate and Intrastate Allocations, University of California, 1981

TABLE III-21

ANALYSIS OF PERCENT PARTICIPATION OF ETHNIC, RACIAL, AND SEX GROUPS IN VOCATIONAL PROGRAMS CLASSIFIED BY EMPLOYMENT OPPORTUNITIES INDICATOR, POSTSECONDARY LEVEL, FY 1979

State	Enroll.	Male	Female	White	Black	Hisp.	Asian	Native Amer.
California								
Low	19.2	24.9	12.6	19.1	17.6	19.0	21.9	19.4
Mid-low	29.9	31.3	28.3	29.8	30.1	30.7	30.3	30.6
Mid-high	32.4	30.8	34.3	33.2	29.5	28.9	32.3	30.2
High	18.5	13.0	24.8	17.9	22.7	21.4	15.6	19.9
TOTAL	504,806	271,138	233,668	389,467	38,766	47,961	23,453	5,159
Colorado								
Low	28.4	31.5	24.5	28.8	26.3	24.6	32.9	23.7
Mid-low	25.5	27.2	23.2	24.9	30.0	28.5	25.4	29.1
Mid-high	25.5	18.1	34.9	24.9	28.1	29.0	28.1	27.9
High	20.7	23.3	17.4	21.3	15.6	17.9	13.6	19.4
TOTAL	33,174	18,726	14,448	28,561	1,332	2,517	413	351
Florida								
Low	31.0	41.1	23.3	29.4	33.7	41.3	35.3	32.8
Mid-low	19.9	28.7	12.5	19.8	21.8	17.3	24.1	18.5
Mid-high	34.3	26.2	41.1	36.8	27.1	25.1	29.1	34.3
High	14.9	5.0	23.1	14.1	17.4	16.3	11.5	14.3
TOTAL	74,662	34,346	40,316	56,268	12,044	5,397	688	265
Illinois								
Low	26.0	41.9	11.9	27.0	21.4	27.5	24.1	27.7
Mid-low	24.0	20.1	27.6	21.8	33.6	27.7	31.5	25.8
Mid-high	16.7	23.2	10.8	17.5	13.3	14.6	14.1	14.3
High	33.3	14.9	49.8	33.8	31.7	30.2	30.3	32.1
TOTAL	115,105	54,412	60,693	91,423	18,744	3,072	1,390	476

Source: The Distribution of Federal Funds Under the Vocational Education Act: Interstate and Intrastate Allocations, University of California, 1981

Minority students are more concentrated in programs with higher than average employment opportunities in Florida, less concentrated in Illinois, and about average in the other two States. In secondary institutions, the special needs populations enroll in greater percentages in programs with more employment opportunities.

SUMMARY AND CONCLUSIONS

In mandating the study of vocational education, the Congress requested information on the distribution of all vocational education funds by four objects: enrollments, services, target populations, and occupations. Schools do not normally organize their financial accounts in terms of these objects, but the NIE study has responded not only to the questions in which the Congress declared an interest but also to the policy issues which those questions imply.

Enrollments and the Distribution of Funds. The Federal Government distributes VEA funds to the States and territories on the basis of population, not vocational education enrollments. Within States, however, enrollments drive the distribution of all vocational education funds. All States distribute VEA funds by a formula that includes enrollment in one fashion or another.

The absence of enrollment from the formula determining the Federal grants to the States has implications for the number of VEA dollars per student, because enrollments are not proportional to population. Vocational education enrollments per 1000 population vary among States and territories by a ratio of more than 3 to 1 for total enrollments and by more than 4 to 1 for the occupationally specific enrollments. Therefore, States with low rates of enrollment receive relatively more dollars per pupil than States with high rates of enrollment. Thus, the impact of VEA funds on programs can vary substantially among States.

Not only enrollments influence the distribution of funds; particular characteristics of enrollment, such as level of education, race and ethnicity of students, and community size, may also affect distribution.

Enrollments by level of education do not seem to be related systematically to the distribution of funds. The VEA set aside for postsecondary and adult programs is 15 percent of the funds available under Subparts 2 and 3, but the actual outlays in fiscal year 1979 for these programs came to about 26 percent of the funds. Forty percent of the total vocational education enrollment was in postsecondary and adult programs in that year. Sixty percent of the total enrollment in occupationally specific programs was in postsecondary and adult programs. The States show no systematic association between relatively high enrollments in postsecondary and adult programs and relatively high VEA expenditures on those programs.

Similarly, there does not seem to be a systematic association between relatively high enrollments in postsecondary and adult programs and relatively high levels of State and local expenditures on these programs. This may be due to the fact that postsecondary and adult programs have other sources of revenue that are not reported, the largest of which is tuition. For this reason, the needs for Federal funds that postsecondary and adult programs may have are not strictly comparable to those of secondary programs, which do not produce tuition income.

Enrollments by race and ethnicity are not used as factors in State distribution formulas. VEDS data show that racial and ethnic minorities are generally represented in secondary programs at lower rates than are nonminority students, which means that they benefit less from VEA funds.

A question frequently raised with respect to enrollments has to do with the effect of community size upon the distribution of funds. Are the recipients of vocational education funds advantaged or disadvantaged if they are located in a large city district, a rural district, or a suburban district? The rural secondary LEAs in most of the States analyzed received fewer VEA funds per pupil than other secondary LEAs, even though they generally had higher per unit costs for programs because of their small size. The largest cities in the same States received higher VEA allocations than the State average, but their State and local expenditures were relatively low. Large city programs, like those in small districts, have higher than average operating costs, and they also have more competition for local tax revenue. Therefore, the financial needs of both large city districts and small rural districts are proportionally greater than those of other districts.

Services and the Distribution of Funds. There are three ways in which services are specified in the Act: they are listed in the subparts as either mandatory or permitted activities; they are targeted to special services for the special populations; and they are stated as priorities for services to be used to improve and expand programs rather than maintain existing programs.

The services and activities mentioned in the Act--in most instances without mandated levels of expenditures--have not generated significant expenditures of either VEA or State and local funds. In fiscal year 1979, more than 90 percent of the VEA outlays and 92 percent of State and local outlays for Subpart 2 were reported simply as expenditures for general vocational education programs and administration. Less than 10 percent of the VEA funds were reported as expenditures on the more specific services. What was spent on these services was highly concentrated in a small number of States. Therefore, if the particular services or activities are meant to stimulate expenditures and bring about change, merely permitting them is not an effective way to accomplish it. The fact that some States incurred large expenditures for selected services and not for other services indicates that States will fund legislated services, but according to their own priorities.

Within the legislated activities, those that are designed to overcome sex sterotyping and sex bias are a Federal priority. The expenditures on the specific services and activities aimed at sex equity were small in fiscal year 1979--0.9 percent of the VEA funds (discounting the required State level expenditures on the sex equity coordinator) and less than 0.1 percent of State and local funds. About 22 percent of all secondary districts and about 40 percent of all postsecondary institutions that responded to the survey said they spent some funds on sex equity, but the average expenditure was quite low.

The second type of services are those that reflect the extra costs of serving target populations. Even though funds are targeted, some States did not spend their entire set aside and few spent much more than the minimum. VEDS data show that relatively small numbers of target students are being served with the set asides, compared to what would be expected based on the relative size of the target population in the general population. The NIE survey data, however, reveal that many more handicapped and disadvantaged were enrolled in programs than are reported by VEDS as benefiting from the set aside. Thus it is likely that some disadvantaged, handicapped, and limited English-proficient students do not require special services and that others may receive additional services but the expenditures are not recorded or reported as excess costs.

Services are also linked to program improvement and expansion or maintenance, but it is almost impossible to show the use of VEA funds for these purposes. Therefore total expenditures were supplied. School administrators estimate that in secondary school districts all vocational education funds were used overwhelmingly for program maintenance. Most postsecondary schools also devoted most of their budgets to program maintenance, but they were likely to spend somewhat more on improvement and expansion than secondary schools.

Target Populations and the Distribution of Funds. Target populations directly influence distribution patterns because of the set-aside provisions in the Act. States use various methods to get funds to target populations, including using concentrations of such populations as a factor in their formulas and setting up pools of funds for special services. Districts with high concentrations of target populations show higher per pupil expenditures than the State average. Therefore, it is safe to say that relatively more funds are being spent in districts with high concentrations of target populations than in districts with low concentrations. It is interesting to note that in many States, high concentrations of target populations in districts turned out to be the dominant factor in determining the amounts of VEA funds they receive.

Occupations and the Distribution of Funds. The Federal Government does not take occupations into account in the distribution process. The States, however, do. One of the mandated priorities is new programs for new and emerging industries, which implies new occupations. The States are also required to show that programs are related to occupational demand, although there is no explicit connection between this planning requirement and the distribution of funds.

Expenditures were not reported by occupation in fiscal year 1979, and it is unlikely that expenditures of VEA funds can be separated from expenditures of State and local funds. It may be assumed that the distribution of funds will generally follow enrollment patterns in vocational education programs.

The enrollment data make it clear that VEA funds are not used solely for occupationally specific education. More than two-thirds of all secondary enrollments and about half of all short-term adult students are in other than occupationally specific programs. An unknown, but still substantial, proportion of VEA dollars is spent on non-occupationally specific education.

Most of those who are enrolled in occupationally specific programs are concentrated in a small number of programs, many of which are clerical and common to nearly all businesses and industries, such as secretarial and general office. The funds, therefore, are also highly concentrated on a small number of programs.

Occupations and Economic Opportunity. Analyses of data for five States show that women are predominantly enrolled in a very small number of programs, they are also much more heavily concentrated than men in programs leading to lower-wage jobs, particularly clerical and secretarial programs. The demand for workers in these jobs has been relatively high, so that women are also more heavily concentrated than men in programs leading to greater employment opportunities. These patterns occur in both secondary and postsecondary programs. The difference in economic opportunities between men and women are much greater than differences between racial or ethnic minorities and nonminority students, or between target populations and nonhandicapped and nondisadvantaged students.

FOOTNOTES

1. This information, by State and by level of education, will be presented in table form in Occupational Education and Training: A Data Book, to be prepared by the Vocational Education Study.

2. Rankings of the States, 1980, (Washington, D.C.: National Education Association, 1980), p. 16.

3. In the multiple regression analysis, the unit of observation is the district, with each district equal to every other district regardless of size. In order to control district size, enrollment was entered first as an independent variable.

4. James P. Greenan, Use of State Special Needs Set-Aside funds for Program Improvement Activities, Draft report from the Leadership Training Institute (Urbana: College of Education, University of Illinois, July 1981). This is a survey of Research Coordinating Unit Directors conducted for the Office of Civil Rights.

CHAPTER IV. ASSESSING EVALUATION REQUIREMENTS

Introduction

The first attempt to assess the Nation's public school vocational education programs and, consequently, the adequacy of Federal vocational policy was undertaken 45 years after the adoption of the Smith-Hughes Act of 1917. In October 1961, at President Kennedy's request, the Secretary of Health, Education, and Welfare appointed a panel of consultants to review and evaluate vocational education. Its report, Education for a Changing World of Work, completed at the close of November 1962, was the basis of the Vocational Education Act of 1963 (P.L. 88-210), which, as has been said, redirected and expanded Federal policy. Under the Act, the Federal Government now undertook to assist the States in order to provide for all citizens access to vocational education programs that were realistic in terms of the Nation's needs for semiskilled and skilled workers and job opportunities.

The Act also described for the first time in Federal vocational education legislation the function of State and local evaluations of programs and services. In developing their plans, it declared, the States were to follow "policies and procedures" that "insure that due consideration will be given to the results of periodic evaluations of State and local vocational education programs in light of information regarding current and projected manpower needs and job opportunities . . . " (Sec. 5(2)). In addition, the Act facilitated the performance of "periodic evaluations" by authorizing the use of Federal funds to carry them out (Sec. 4(a)(6)).

Provisions dealing with evaluative activities have been a distinguishing and expanding feature of Federal education legislation since 1963, with the most notable early development being the evaluation requirements of the Elementary and Secondary Education Act of 1965.[1]

The 1968 amendments to the VEA (P.L. 90-576) continued to call upon the States to give "due consideration" to the results of "periodic evaluations" in shaping State plans and to authorize the use of Federal grants to conduct such evaluations.[2]

The connection between program evaluation and more effective State and local program planning in the light of needed skills and present and future job opportunities, on the one hand, and improvement in the quality of educational programs, on the other, had been registered in the legislation of 1963 and 1968. However, reports issued in the mid-1970s showed that the connection still was not being made.[3] Further, these reports documented deficiencies in the information presumably useful for planning, including information from evaluations. Both the House and Senate were heavily influenced by these findings. The House Report, for example, noted that the States were not providing information on the effectiveness of vocational education programs in relation to the goals set forth in State plans and the economic returns to students. The very "lack of systematic programmatic evaluation" diminished the chances for engaging in rational planning and for reaching rational resource allocation decisions.[4]

The 1976 legislation sought to correct these major deficiencies in the vocational education enterprise by providing for (1) systematic evaluations, (2) labor market-oriented planning, (3) improved occupational information systems, and (4) the requirements for new data for accountability. Congress clearly saw all these as interrelated elements. The Senate Report, commenting on the features of the proposed legislation designed to correct current weaknesses, said that

> one key element of the comprehensive plan would be the development of procedures for continuous planning and evaluation, including the regular collection of data, to be available to all parties in the State to whom it would be of interest. A solid data base will give a State a basis for program evaluation. Evaluation will, hopefully, lead to improvement in program quality. Both data and evaluation can result in improved planning capability.[5]

In the 1976 amendments, then, the new provisions affecting evaluation constituted a key feature of Federal legislation.[6] For the first time, Federal and State Governments were required to conduct systematic program evaluations. A sharply enhanced emphasis upon evaluative activities sought to tie annual and longer-term vocational education planning and program offerings to labor market demands for occupational skills and actual job opportunities.

The 1976 Evaluation Requirements

Under the 1976 statute (Sec. 112), each State is directed to evaluate the effectiveness of each program assisted during the life of its 5-year plan, and is authorized to use Federal funds for that purpose.[7] Each State is further directed to use the results of these evaluations to revise its programs and to make them available to the State Advisory Council on Vocational Education (SACVE), presumably to be used for its independent annual evaluation of State programs and services. States are also to use their results in assisting LEAs and other eligible recipients to improve their programs. Each State, moreover, is directed to conduct an evaluation of "each . . . program within the State which purports to impart entry level job skills. . . ." The criteria stipulated for these evaluations are "the extent to which program completers and leavers--

(i) find employment in occupations related to their training, and

(ii) are considered by their employers to be well trained and prepared for employment . . . " (Sec. 112(b)(B)).

These criteria do not apply in evaluating prevocational and so-called nonoccupational programs in industrial arts and consumer and homemaking education.

The statute mentions no other criteria for States to use in evaluating the effectiveness of all other programs. A large number of criteria are specified, however, in the regulations issued October 3, 1977.[8] These state:

> The State board shall, during the five-year period of the State plan, evaluate in quantitative terms the effectiveness of each formally organized program or project supported by Federal, State, and local funds. These evaluations shall be in terms of:
>
> (a) Planning and operational processes, such as:
>
> (1) Quality and availability of instructional offerings;
> (2) Guidance, counseling, and placement and follow-up services;
> (3) Capacity and condition of facilities and equipment;
> (4) Employer participation in cooperative programs of vocational education;
> (5) Teacher/pupil ratios; and
> (6) Teacher qualifications.
>
> (b) Results of student achievement as measured, for example, by:
>
> (1) Standard occupational proficiency measures;
> (2) Criterion-referenced tests; and
> (3) Other examinations of students' skills, knowledge, attitudes, and readiness for entering employment successfully.
>
> (c) Results of student employment success as measured, for example, by:
>
> (1) Rates of employment and unemployment;
> (2) Wage rates;
> (3) Duration of employment; and
> (4) Employer satisfaction with performance of vocational education students as compared with performance of persons who have not had vocational education.
>
> (d) The results of additional services, as measured by the suggested criteria under paragraphs (a), (b), and (c) of this section, that the State provides under the Act to these special populations:
>
> (1) Women;

(2) Members of minority groups;
(3) Handicapped persons;
(4) Disadvantaged persons; and
(5) Persons of limited English-speaking ability.

Under each of the four dimensions of programs and services to be evaluated for effectiveness, the regulations list relevant criteria that differ one from another in nature and also in ease or difficulty of application. The criteria for evaluating planning and operational processes involve resource factors, for the most part, which are "input" variables or measures. For student achievement and employment success, however, the criteria are "outcome" variables or measures. For evaluating the results of additional services for meeting the needs of special populations,[9] the criteria are both input and outcome measures.

The primary purpose of this chapter is to analyze the 1976 State evaluation requirements and criteria, and its second purpose is to report on the progress of the States in implementing them. First, however, the manner in which the requirements have been implemented is reviewed.

Implementing State Evaluation Requirements

The more critical of the evaluation requirements in the 1976 legislation are those to be fulfilled by the States, because they bear most directly and immediately upon program planning, revision, and improvement at the State and local levels. How a State conducts and uses the evaluations can determine the success or failure of one of the mechanisms upon which the 1976 legislation relied so heavily for improving the performance of the vocational education enterprise. Consequently, the NIE has assessed the State evaluation performance at three different times. In the spring of 1978, information on State evaluation procedure was secured from all States through documentary materials and personal interviews.[10] During the 1979-80 school year, information on State and local evaluation practices was collected as part of case studies in 15 States.[11] Finally, in the spring of 1981, information on evaluative capabilities was collected through a survey of State directors of vocational education.[12]

Before the 1976 amendments, evaluation of vocational education programs in most States was done informally. Few, if any, States were conducting evaluations as extensive as those later called for in the regulations, but some of the elements for developing formal systems were in existence. For example, most States reviewed local programs, but only infrequently, as part of a formal statewide evaluation. Student achievement was measured at the local level by teachers and, for some occupations (e.g., practical nursing), through State licensing or certification examinations. Student placement data were collected in many States, but often by teachers in ways that did not assure reliable and valid information. In response to the 1976 legislation, States began to systematize evaluation procedures.

By the spring of 1978, some 6 months after the regulations had been issued but before a policy memorandum on evaluation had been circulated by BOAE, work was underway in most States to extend or develop evaluation procedures. State educational officials were reported as asserting that they were overwhelmed by the prospect of implementing the detailed, complex, and costly requirements of the regulations. Moreover, during the first year developmental work had to proceed at State expense, because Federal money had not been appropriated (under Sec. 102(d)) for this purpose.

Of the four dimensions of programs and services specified for evaluation in the regulations--planning and operational processes, student achievement, student employment, and services to special populations--reviews of planning and operational processes and assessments of student placement were being given most attention. Reviews of planning and operational processes, usually called "program reviews," were being conducted in 13 States and being revised and systematized in another 37. Procedures for assessing student placement were reported to be in place in 20 States and were being revised or developed in another 25. Far less attention was being given to systematic statewide evaluations of student achievement, for these required the use of instruments which had not yet been developed. Almost every State, therefore, continued to rely upon teachers to assess student achievement and waited to learn what other States proposed to do.

By the school year 1979-80, NIE-supported field work in 15 States showed that evaluation capabilities had generally been enhanced but that primary attention was still being devoted to planning and operational processes and student placement. Far less progress had been made in developing ways of measuring student achievement and in assessing the extent to which the needs of special populations were being met.

The survey of all the States in the spring of 1981 showed that additional and even major steps had been taken toward implementing the requirements in the regulations. Questionnaire returns from 50 States, the respondents being State directors or their designated representatives, gave the following account of the extent to which evaluation requirements had been implemented.

The picture delineated by Table IV-1 may be an optimistic one. It does not indicate in what ways requirements were being fully implemented; nor does it signal whether the quality of the procedures is sufficiently high. As will be shown later, measures of student achievement are not available for all occupations, and other research shows that almost no assessment of special needs services is taking place. Hence, it appeared that even though all States responding to the questionnaire had made a start on implementing the requirements, much remained to be accomplished.

TABLE IV-1

STATE IMPLEMENTATION OF EVALUATION REQUIREMENTS, SPRING 1981

Requirement	No. of States Fully Implemented	No. of States In Process
Placement level of graduates	35	15
Employer assessment of graduates	27	20
Assessment of planning and operational procedures	21	24
Assessment of special needs services	18	29
Assessment of student performance	14	30

Source: Tim L. Wentling, A Survey of State Directors of Vocational Education

Among the reasons cited for the partial implementation were the lack of resources to develop and carry out the required procedures, the minimal technical assistance provided by BOAE, lack of guides and books, and inadequate Federal guidelines.[13] Lack of State interest and effort does not appear to have been significant in accounting for the partial implementation. The States, on balance, asserted an increasing commitment to evaluation, a belief in its usefulness, and a willingness to develop capabilities.

By the spring of 1981, State directors registered approval of the evaluation systems then in place or being developed. According to their survey responses, evaluation findings were most often used to improve programs, prepare accountability reports, and assist in decisionmaking. Asked what evaluations they would conduct if the Federal requirements were eliminated, the respondents in effect replied that they would fulfill most Federal requirements, as Table IV-2 shows. Whether in fact this would take place in the absence of Federal requirements cannot, of course, be known.

TABLE IV-2

STATE PREFERRED EVALUATIONS IN ABSENCE OF FEDERAL REQUIREMENTS, SPRING 1981

Type of Evaluation	No. of States
Placement	43
Employer reaction	35
Planning and operational processes	38
Services to special populations	36
Student performance	34
Total program	1
None	1

Source: Tim L. Wentling, A Survey of State Directors of Vocational Education

The State officials also reported that they were in considerable agreement with the indicators of program quality explicitly stated in or implied by the statute and the regulations. Thus, as Table IV-3 shows, almost all State directors favor using employer judgments and placement rates as evidence of program quality. However, as will be seen later, vocational educators have objected to holding vocational education responsible for the employment of its students. A possible explanation for the contradiction is that while State officials believe that vocational education programs must be evaluated in terms of their relationship to labor market demand, they do not favor the particular way in which the legislation chose to do this.

Legislative Requirements: Problems of Criteria and Data

The 1976 legislation requires data on the employment of vocational education program completers and leavers in entry level jobs related

TABLE IV-3

INDICATORS OF PROGRAM QUALITY FAVORED BY STATES, SPRING 1981

Indicators	No. of States Favoring
Employer feedback	47
Placement level	44
Quality curriculum materials	37
Job satisfaction of graduates	37
Instructor performance	36
Student test performance	31
Condition of equipment	25
School staff morale	17
Participation	1
Serving special needs	1
Instructional preparation	1
Facilities	1
Instructional materials	1
Retention of students	1
Advisory committee use	1
Guidance, counseling, and placement	1

Source: Tim L. Wentling, A Survey of State Directors of Vocational Education

to their training and on their employees' assessments of their training and preparation for work. Such data are aggregated and reported by the States to the Federal Government under the new VEDS. On the surface, it might appear that these data would be relevant, first, for judging whether the vocational education programs pursued by secondary students correspond to labor market demands for skills and to actual job opportunities; second, for revising program offerings and plans; and third, for suggesting how programs might be improved by indicating deficiencies. However, neither category of data is very useful for any of these three purposes.

Placement Data

The Interim Report stated that, by and large, in the 15 States studied, placement data were not being used to revise program offerings, as the law had intended.[14] This seeming failure should not be viewed negatively, however, since a number of problems are associated with using the placement measure in decisions on program offerings. First of all, the variability among the procedures used to secure placement data raises questions about the validity and comparability of local and State aggregations of the data. Similarly, it certainly raises questions about how meaningful nationally aggregated placement data can be. A second and more severe set of problems extends beyond technical problems to the basic limitations of placement rates.

One of the technical difficulties comes in determining what is meant by the statement that a certain proportion of completers and leavers from entry level programs are employed "in occupations related to their training." The idea of "relatedness" differs from one occupational field to another, is affected by the distinctive skill features associated with a particular job with a specific employer, and clearly does not have a self-manifesting meaning. In follow-ups, sometimes teachers decide whether a job is related to training, but the determination is usually made by students. In very few cases is it the result of a systematic comparison between the occupational skills taught in a vocational education program and those required for the job. Thus it is risky to rely upon the reported data on "relatedness" in assessing the fit between the content of entry level training and the skill requirements of jobs found by completers and leavers. One study, comparing the judgments made by teachers on the extent to which the two are related with judgments on educational requirements made through analyses of the occupational skills of selected job titles in the Dictionary of Occupational Titles, found only a 55 percent correspondence between the two.[15]

Against what base should a "placement rate" be calculated? Should the base be all completers and leavers from a school or in a LEA, a local labor market, or a State, who seek employment? Should the base be program-specific? Should the rates take into account only those looking for full-time employment? Placement data, of course, apply only to the slightly more than half of the completers who annually now become new entrants into the labor force. This includes those who, while continuing with their education, may be working part time. It should be added that placement data are not likely to differentiate between occupationally specific students and others enrolled in vocational education classes.

Since the procedures used to calculate placement vary from place to place, the resulting data are not comparable.[16] One school, for example, may calculate placement rate by dividing the number of students placed in jobs related to their training by students looking for jobs. In another school, the denominator for determining the placement rate might consist of all completers and leavers, whether or not they were looking for a job. If standardized procedures were used universally, aggregated placement rate data would be meaningful.[17]

Another question concerning the bias of the response is illustrated by a report on Oakland, California, made by the NAACP Legal Defense and Education Fund. The report asserted that the 37 percent of the students followed up who did not return their post cards are more than likely the very persons who are unemployed and do not wish to admit it. The school district reported optimistically that only 3 percent of the respondents are unemployed,[18] although the total teenage employment rate in the United States was 16.1 percent and black teenage employment was 35.5 percent in 1979.

The problems with the placement rates that have been considered could presumably be solved, though with great difficulty and at great expense, through changes of a technical nature in the procedures for securing data. Yet a question still remains about the utility of placement data--even if they were much more valid, reliable, and comparable in character than they are now--for reaching decisions on changes in program offerings or for making program improvements. At best, as they do now, they would signal the existence of a problem and invite inquiry. Thus, a lower than average placement rate for a school might reflect the fact that it is located in an economically depressed area. Or it might prompt an investigation to find out whether students were enrolled in programs preparing for occupations in which supply far exceeds demand, whether students were being poorly educated for jobs in high demand, or whether schools lacked placement resources.

Placement rates overall or for "related" occupations may invite inquiry, but they do not alone suggest corrective action. This is particularly true for State-aggregated data reported by broad vocational field, such as trade and industry or health, which the States provide for VEDS. Obviously, district or school placement rates for specific programs of instruction, such as food services, automotive technology, or ornamental horticulture, would be more useful for finding out what lower than average rates signified.

Placement rates, finally, are weak indicators of the extent to which the programs offered correspond to the current demands for semi-skilled and skilled workers. First, placement rates report on the employment successes or failures of students who had been enrolled in programs that were offered. They provide no information on situations in which there are high demands for occupational skills which could be acquired through programs not being offered. Newspaper advertisements or increases in wage rates, however, would. Where placement rates give information on current labor market situations, they may prompt program changes that can create problems. By the time new program are initiated or old ones modified, labor market conditions may have changed. Fluctuations, sometimes quite sharp, occur in the demands for skills. Shortages in an occupational field may vanish during the 2 or 3 years it may take to train new workers with the required skills.

Employer Satisfaction

Whether employers think that completers and leavers from entry-level programs are well trained and prepared for employment is held to be important and useful information by Federal legislation and is so perceived by State directors. Unfortunately, the problems associated with data on what is commonly called "employer satisfaction" are even more acute than with placement data.

Employer views can be obtained in several ways. They may be solicited by school officials or registered by employer members of local advisory councils. They may be gathered in conjunction with periodic surveys of employer needs for workers in the future. The 1976 amendments required follow-up surveys of employers on student training and preparation for employment. The aggregate State results of these surveys are reported under VEDS.

For several reasons, the employer assessment data collected by the States have very limited value. First, the response rate on the follow-up surveys is too low to be meaningful: it is frequently not higher than 5 percent and may not exceed 15 percent at best.[19] A second reason is that the data are likely to be biased: often students identify employers for follow-ups. Vocational education students who thought their employers were dissatisfied with their work would not be likely to identify employers for follow-up. On the other hand, employers who had had unsatisfactory experiences with vocational education students would not be likely to hire them knowingly and, consequently, would not be identified for follow-up surveys by their employees.[20]

Third, the terms "well trained" and "prepared for employment" may mean different things to different employers and for different occupations. Since the standards against which employers rate their vocational education employees are not known with any precision, it is risky to place much reliance upon their assessments. Sometimes employers are asked about the "technical knowledge" that vocational education completers and leavers bring to their jobs, and sometimes they are merely asked whether they are satisfied with the students' preparation for work. Fourth, employers are not likely to know whether an employee is a vocational education completer or leaver, and, therefore, cannot compare his or her performance with that of new labor force entrants who had not been enrolled in vocational education programs. Fifth, it is reported that employers have been reluctant to turn in negative reports because they do not know how they will be used. Many often believe they have nothing to gain and may have something to lose by responding to surveys. There is reason to suspect that employers who respond are those who can report favorably on the performance and skills of their vocational education employees.

During the school year 1979-80, in the 15 States in which case studies were conducted, the situation varied in the work underway on indicators of employer satisfaction. Formal employer follow-up data were being collected less commonly than student follow-up data. Almost half of the 15 States lacked statewide follow-up procedures with employers for either secondary or postsecondary students in that school year.[21] Although in the 1981 survey State directors registered approval of the employer evaluation requirement, vocational educators had often voiced doubts about its worth as an indicator of program effectiveness when they were earlier interviewed for the 15 States' case studies. In one State, employer surveys were not planned because it had been learned that employer follow-up was so highly correlated with student reports of employment success that separate measures of employer satisfaction would simply be duplicative.

Like placement data, employer assessment data should not automatically trigger programmatic decisions. They do not alone serve to identify either mismatches between program offerings and labor market demands or deficiencies in particular programs with sufficient specificity to point to corrective action. At best, they provide information about past program offerings rather than guidance for future potential programs.

Evaluation Requirements in the Regulations

Members of the Congress believed that the two evaluation requirements just discussed would "show most clearly whether persons in vocational education are showing the results of such training,"[22] but they did not preclude the use of other measures in determining the effectiveness of vocational education programs. The regulations, as has been seen, set forth other evaluation requirements which will now be examined.

Planning and Operational Processes

Evaluation of planning and operational processes in order to determine effectiveness and program quality involves the application of criteria which represent resources essential for conducting programs and providing services. Such evaluations, frequently called "program reviews," can identify the strengths and weaknesses of the resource base and be acutely relevant to program improvement efforts. Program review procedures vary from State to State, but there is one that is fairly typical.[23] It generally begins with school or district self-study, which is followed by an on-site review by a team of experts from outside the district. The topics that may be considered are numerous, as Table IV-4 shows. Sometimes they parallel those covered in accreditation reviews, such as quality of facilities, equipment, material, and supplies, and certification of teachers. Sometimes program reviews focus on topics emphasized by Federal policy, such as access to programs by the disadvantaged and handicapped, the reduction of sex stereotyping, or the use of labor market information in planning.

The more the objectives of Federal policy--such as improved planning, readier access to vocational education programs for target populations, or greater correspondence between program offerings and labor market demands for occupational skills--become topics in program reviews at the local level, the better the chances are that they will be realized through actions taken at that level. The States, by and large, can exercise little control over local programmatic decision-making. But their combined monitoring and technical assistance role in connection with program reviews is widely accepted by LEAs and schools. Consequently, to the extent that States emphasize Federal objectives in this context, they can influence behavior at the local level.

In the 15 States studied in 1979-80, vocational education officials believed that program reviews would primarily be used to improve programs and to show whether identified weaknesses were being corrected. However, the States varied considerably in the actual use they made of the reviews. About half asked the local agencies to state in writing when and how they planned to correct deficiencies revealed by reviews. Some merely communicated the results and left it to local administrators and teachers to decide to act on them. Many, but not all, of the States studied offered technical assistance in improving programs.[24]

TABLE IV-4

TOPICS COVERED IN PROGRAM REVIEWS

Program Operations/Management

- Administration
- Supervision
- Planning and evaluation (philosophy, goals, objectives, needs assessment, short- and long-range plans, use of follow-up data)
- Facilities
- Equipment
- Materials and supplies
- Guidance services
- Placement services
- Sex equity activities
- Access to special populations
- Additional services to special populations

Program Information

- Curriculum
- Learning/teaching resources
- Educational resources
- Instructional context

Student Information

- Recruitment
- Selection
- Financial aid
- Activities
- Organizations
- Achievement
- Placement
- Follow-up

Staff Information

- Qualifications (experience, training)
- Professional development

Community Information

- Community resources
- Community relations
- Local advisory councils for vocational education

Source: The Abt Report

Student Achievement

It seems on the surface eminently reasonable to judge how well or poorly a course, a program of study, or a school does by what knowledge and skills the students learn. It is assumed that students should have achieved acceptable levels of proficiency in the knowledge and skills that constitute a given curriculum. The regulations adopt this view in calling for evaluations of vocational education programs in terms of the "results of student achievement," which could, presumably, be measured in several different ways. After the adoption of the 1976 amendments, vocational educators declared that they strongly preferred such evaluative criteria to the criterion of placement. They maintained then, as they do now, that the "employability," and not the employment, of vocational education students is an appropriate criterion, since the placement rates for students employed in jobs related to their training are determined by a host of noneducational factors.

For understandable reasons, however, program evaluations in terms of student achievement were not being universally conducted. As has been noted, even as late as the spring of 1981, 30 State directors reported that this requirement was not fully implemented. The examples of measures of student achievement cited in the regulations were "occupational proficiency measures," "criterion-referenced tests," and other ways of determining student "skills, knowledge, attitudes, and readiness for entering employment."

If the kinds of tests for knowledge and skill proficiency conventionally designed and administered by teachers or administrators could be relied upon, there would be no practical impediment to evaluations. However, there is a major practical problem with "occupational proficiency measures" and "criterion-referenced tests." The first do not yet exist for most occupations, and criterion-referenced testing is still in its developmental stages. Developing measures is a complex and costly process.[25] In fact, the development of competency-based assessment instruments has been underway only relatively recently.[26] In light of this fact, it is probably the case that the 14 States who reported in the 1981 survey that assessments of student performance were fully in place were not using tests of known reliability or validity for all occupations. Still another point to be emphasized is that there is uncertainty about the relative weight of each of the factors that determine "readiness for entering employment" and about the combinations of knowledge, skills, and attitudes that are most significant. Student achievement measures, however appropriate and important they are in theory, can be applied in practice only to a very limited extent today.

Additional Services to Special Populations

Evaluating the results of providing additional services for special populations, the last of the four dimensions of evaluation required by the regulations, was not yet fully implemented in at least 29 States in the spring of 1981. The case studies conducted in 15 States during the 1979-80 school year showed that special needs populations were given attention in program reviews largely with respect to the availability of services and access to programs. Thus, characteristic program review questions were: Are supplementary services provided for the disadvantaged and the handicapped? Are instructional materials nondiscriminatory in terms of sex, race, or ethnic origin? Is placement support nondiscriminatory with respect to sex, race, or ethnicity? At the same time, however, very little was being done to evaluate, in terms of planning and operational processes, student achievement and student employment success, the "results of additional services" provided by States to women, members of minority groups, handicapped and disadvantaged students, and persons of limited English-speaking ability.[27]

That attention was given to the provision of services and to access to programs, rather than to the "results of additional services" for special needs populations, is both understandable and reasonable. Given the problems associated with the criteria for student achievement and employment success, the likelihood of securing meaningful outcome data that would lend themselves to the purpose of program improvement appears very slight. The diversity of the special needs population, moreover, calls for a battery of sophisticated and costly evaluations. Probably very few local districts and institutions have the financial and technical staff resources necessary to conduct such evaluations. They are, of course, under pressure to produce student follow-up information for VEDS showing employment, unemployment, labor force participation, and educational status by sex, race, and ethnicity, and for those who are handicapped. There is no VEDS requirement to show what difference "additional services" provided might have had for each status. Some very large school districts maintain information systems with data on target populations, and a few States--Minnesota, for example--have laid the groundwork for statewide assessments of their program needs. But this does not mean that either States or localities are presently in a position to evaluate the results of the additional services provided for special needs population. NIE supported case studies of vocational education programs for these populations in 15 communities and did not find that evaluations of this kind were being conducted in 1979-80.[28]

CONCLUSIONS

Three major conclusions may be drawn from the preceding examination of the evaluation requirements of the 1976 amendments. One is that they significantly stimulated evaluation activities on the part of the States and localities. In doing that, the Federal legislation helped bring about a heightened appreciation of the usefulness of systematic evaluations for program planning and improvement and contributed to enhancing both State and local capabilities for conducting evaluations. The second conclusion is that the required statutory evaluations of the placement of vocational education students in entrylevel jobs related to their occupational training and of employer judgments on their training and preparation for employment, however justified by the need to effect a reasonably close tie between schooling and the world of work, have led to the generation and collection of data of dubious validity and reliability. Moreover, even if these data were valid and reliable, they would have slight utility for the purposes of improving programs and deciding on program offerings in line with changing labor market conditions. The third conclusion is that only one of the four approaches to evaluating the effectiveness of programs specified in the regulations--that dealing with planning and operational processes--has the potential to prove useful for the purposes of improving programs and decisionmaking on program offerings, at least in the immediate future. Even this approach needs much improvement in most States before it can realize its full potential.

The concern of the 1976 legislation with employment-related outcomes was well founded. There had been reason to believe that some vocational education programming was ignoring labor market demand and supply relationships and that the knowledge and skills taught were not fully up to date. The statutory evaluation requirements sought to correct such deficiencies through better planning and improved programs. Although the resulting placement and employer satisfaction data are not helpful in this regard, such mechanisms as local level planning might be. The difficulties associated with measuring the economic and other outcomes for participants in vocational education programs are substantial. (Chapter VII discusses what has been learned on this score through well-conducted research.) Even with reliable measurements of student employment success and student achievement, little can be done to effect program improvements, unless rich information on program processes is also available--an obvious point which is frequently ignored. This fact, combined with the technical difficulty and expense of assessing student employment success and student achievement, makes these more appropriate measures for special education research studies than for routine evaluation procedures. These and other considerations earlier set forth point to the desirability of strengthening program reviews which emphasize relevance to labor market conditions, progress toward equity goals, and identify the sources of program ineffectiveness or poor quality.

FOOTNOTES

1. See Senta A. Raizen and Peter A. Rossi, eds., Program Evaluation in Education: When? How? To What Ends? (Washington, D.C.: National Academy Press, 1981).

2. The Act also charged the National Advisory Council on Vocational Education (NACVE) with the responsibility to review the effectiveness of programs and to conduct independent evaluations. The State Advisory Councils were to evaluate programs and services and report annually on their effectiveness in meeting the objectives of the State 5-year plans. The 1968 amendments also authorized the use of Federal funds to evaluate projects for the development and training of teaching and other vocational education personnel. See P.L. 90-576, Secs. 104, 122, 123, and 132.

3. The two most influential studies were: Report of the Comptroller General of the United States, What is the Role of Federal Assistance for Vocational Education? (Washington, D.C.: U.S. General Accounting Office, 1974); and D. W. Drewes and Douglas S. Katz, Manpower Data and Vocational Education: A National Study of Availability and Use (Raleigh, N.C.: Center for Occupational Education, North Carolina State University, 1975.)

4. Ibid., p. 20.

5. U.S. Congress, Senate, Committee on Labor and Public Welfare, Education Amendments of 1976: Report to Accompany S. 2657, Senate Report No. 94-882, 94th Cong., 2nd Sess., 1976, p. 68.

6. See Chapter I; also, The Interim Report, Chapter V, and Gerry Hendrickson, Evaluating Vocational Education: The Federal Stimulus (Washington, D.C.: National Institute of Education, 1981).

7. Other provisions of the 1976 amendments, it may be noted, deal with evaluations. These are directed at the Commissioner of Education and BOAE (now the Secretary of Education and OVAE, respectively) and the Advisory Councils, both National and State. The commissioner is charged with including summaries of the findings of all Federal program reviews and State evaluations in the Commissioner's annual reports to the Congress. BOAE is required to conduct reviews of the federally assisted programs in 10 states annually, analyzing their "strengths and weaknesses. . . ." The National Advisory Council is directed (Section 162(b)), as it had been earlier, to conduct independent evaluations of federally assisted programs and to review their "administration and operation," evaluating their effectiveness in light of their purposes. As they had been earlier, the SACVEs are directed (Section 105(d)(3)) to "evaluate vocational education programs, services,

and activities," and to prepare an annual report on their effectiveness. This chapter deals only with the State evaluation requirements in Sec. 112.

8. *Federal Register*, vol. 42, no. 191, Sec. 104.402.

9. The term "minority groups" does not appear in Federal vocational education legislation.

10. Esther Gottleib Smith and Nancy Holt, *State of the Art of Vocational Education Evaluation: State Evaluation Procedures and Practices* (Belmont, Massachusetts: CRC Education and Human Development, Inc., January 1979).

11. Vernon L. Beuke et al., *Implementation of the Education Amendments of 1976: A Study of State and Local Compliance and Evaluation Practices*, Final report to the National Institute of Education, NIE-400-78-0041 (Cambridge, Massachusetts: Abt Associates, Inc., 1980). (Hereafter cited as The Abt Report.)

12. Tim L. Wentling, *A Survey of State Directors of Vocational Education* (Urbana: University of Illinois, June 1981). The survey was administered by the National Association of State Directors of Vocational Education, which, however, played no part in designing the questionnaires or analyzing the responses.

13. Ibid., p. 8.

14. *The Interim Report*, Chapter V. See also Hendrickson, op. cit.

15. Elinor Woods and Walt Haney, *Does Vocational Education Make a Difference? A Review of Previous Research and Reanalyses of National Longitudinal Data Sets* (Cambridge, Massachusetts: The Huron Institute, 1981), Chapter 4, Sec. 5. (Hereafter cited as The Huron Report.) The present edition of the *Dictionary of Occupational Titles* has information on 12,099 occupations and an additional 16,702 related or synonymous occupational titles.

16. The Huron Report, Chapter 4, Section 1.

17. This can be done. For example, the Department of Labor has procedures for determining employment and unemployment that yield aggregated national rates for localitites that can be compared. In fact, unemployment rates are related to placement rates and could be substituted for them with much gain and little loss. Placement rates of students in jobs related to their training are a subset of employment rates. So are the rates for students placed in jobs not related to their training. Switching to unemployment rates would mean that the distinction between the two

would be lost. Given the difficulty of determining whether a job is "related to training," the loss might be minimal.

18. NAACP Legal Defense and Education Fund, Inc., Vocational Education: Cause or Cure for Youth Unemployment? A Report to the Citizens of Oakland, California, April 1981, p. 8.

19. Statement by Dr. Robert Morgan of the National Center for Education Statistics, February 16, 1981. VEDS information for Ohio, for example, shows a 12 percent employer response rate overall for students followed up.

20. The Huron Report, Chapter 4, Section 6.

21. The Abt Report, p. 80.

22. U.S. Congress, House, Committee on Education and Labor, The Vocational Education and National Institute of Education Amendments of 1976: Report to Accompany H.R. 12835, House Report No. 94-1085, 94th Cong., 2nd Sess., 1976, p. 38.

23. The Abt Report, pp. 66-75.

24. Ibid., p. 74.

25. Walt Haney, "Federal Requirements for the Evaluation of Vocational Education Programs," paper prepared for NIE (Cambridge, Massachusetts: The Huron Institute, August 1981), pp. 48-49.

26. The Vocational-Technical Education Consortium of States (V-TECS), a consortium of 45 States, is developing competency-based curriculum materials which will provide measures for tasks performed by program graduates. In 1979, BOAE awarded a contract to the American Institutes for Research to develop competency instruments in seven occupational clusters. In addition, a 6-State consortium is supporting the effort known as Students' Occupational Competency Achievement Testing, which has thus far developed some 20 tests.

27. The Abt Report, pp. 82, 98. In connection with questions of access, this report observes that "some States had established standards for acceptable levels of access. One, for example, has standards for vocational education which specify that the percentage of women, minority groups, disadvantaged and handicapped, and limited English-speaking students enrolled in vocational education in the region be the same as their respective percentage living in the region. As regards the elimination of sex bias and sex stereotyping, the standards in this State require that programs with 80 percent or more single-sex enrollment have an active recruit-

ment program to increase enrollment of the other 20 percent enrollment of either sex."

28. Jacques Nacson and Ella Mizzel Kelly, Vocational Education: Meeting the Needs of Special Populations (Washington, D.C.: A. L. Nellum and Associates, 1980).

CHAPTER V. VOCATIONAL EDUCATION AND CETA: POLICY AND PROGRAM COORDINATION

Introduction

The relationship between the Vocational Education Act of 1963, as amended, and the Comprehensive Employment and Training Act of 1973 (CETA), is complex. It consists of many different kinds of ties and associations ranging from informal exchanges of information on labor market conditions to arrangements for funding support personnel and services, to contractual agreements for operating training programs. The various aspects of the relationship are neither systematic by design nor uniform in function.

The coordination efforts emerge from two systems that are quite diverse. Vocational education is largely a State and local program that delivers education and training programs. CETA, on the other hand, is a Federal system that acts as broker for a variety of Federal aims such as income transfer, public service employment, and economic development, as well as providing training for employment. Unlike the vocational education system, under CETA the decisions for the expenditure of Federal funds are made on the local level. Coordination between the two systems is the product of a history of Federal policy that began with the adoption of the Manpower Development and Training Act (MDTA) in 1962, and in which the most recent changes in legislation occurred with the 1978 amendments to the CETA. It should be mentioned, too, that the goals for employment and training which CETA and the VEA seek to address are also the concern of other Federal programs germane to the development of the Nation's human resources.

The relationship between the VEA and CETA is commonly described as constituting forms of coordination, linkage, or articulation. This relationship began with a legislative mandate under MDTA and has come to comprise the activities of a variety of State and local agencies and organizations, both public and private, which are involved in the more effective development and utilization of the Nation's human resources and which may have different, but not incompatible, primary purposes. In the amendments to the VEA and CETA adopted in 1976, there is an invitation to coordinate these two domains of Federal policy not only with one another but also with a third, that dealing with vocational rehabilitation. This seems to offer the prospect of a less fragmented, even if not fully integrated, conception of Federal human resource policy.

No large-scale, systematic study has been undertaken to examine the many ways in which CETA and the VEA affect each other. Most studies have examined issues specific to the development of particular programs, thus precluding an understanding of the larger context of Federal, State, and local policy in which these programs are formed and operated. The evidence now available is drawn heavily from the attention paid to exemplary or selected programs rather than from research on the patterns of behavior induced by the coordination of the two laws. Moreover, much of the information essential for depicting coordination is not included in the information systems established by the Departments of Education and Labor. This chapter attempts to describe the different forms of coordination on the basis of this body of evidence and the results of more systematic NIE-supported inquiries. These were the field studies in 15 States conducted by Abt Associates, Inc., the studies of 15 communities conducted by A. L. Nellum and Associates, Inc., and the survey of secondary and postsecondary institutions carried out by the University of California at Berkeley.[1]

Coordination for Planning

By 1976, the Congress was more interested than ever before in increasing coordination between vocational education and CETA programs.

It adopted amendments to the two Acts at the same time, amendments so similar in language that they have come to be called "joint amendments." These amendments were unique. They emphasized for the first time the mutual participation of vocational education and CETA agencies and officials in planning the coordination and use of Federal resources, available from VEA, CETA, and vocational rehabilitation legislation, for employment and training and vocational education programs. This was a departure from previous Federal legislation, which sought to effect coordination through provisions governing administrative procedures and the uses of funds and by requiring interlocking memberships between the State Boards for Vocational Education and the State Manpower Services Councils (SMSCs), later renamed the State Employment Training Councils (SETCs).

The 1976 amendments to CETA and the VEA were the most direct effort made to effect the common use of resources up to that time. In addition to requiring interlocking memberships between the SMSCs and the State Advisory Councils on Vocational Education (SACVEs), with each organization commenting on the other's annual report, the 1976 VEA amendments required each SACVE to identify, after consulting with the SMSC,

> the vocational education and employment and training needs of the State and assess the extent to which vocational education, employment training, vocational rehabilitation, and other programs assisted under this and related Acts represent a consistent, integrated, and coordinated approach to meeting such needs . . . (Sec. 105(d)(4)).

The same charge (Sec. 162(b)(4)(A)) was given to the National Advisory Council on Vocational Education, which was to consult with the National Commission for Manpower Policy, later renamed the National Commission for Employment Policy. These provisions created opportunities for planning vocational and training programs that cut across separate, and what had been largely autonomous, policy arenas. Whether these new opportunities have in fact been grasped and exploited is, of course, another matter.

The 1976 amendments supported these coordinating mechanisms by taking a step to provide occupational information that would meet the needs of both vocational education and employment and training programs. This step was the establishment of a National Occupational Information Coordinating Committee (NOICC), funded under the VEA and CETA, which was to help establish in each State receiving VEA and CETA funds a State Occupational Information Coordinating Committee (SOICC). Representatives from the Department of Health, Education, and Welfare (later the Department of Education) and from the Department of Labor, including the Assistant Secretary of Employment and Training, were to be the members of the NOICC. Its tasks were to improve coordination among vocational education and employment and training personnel at all three levels of government and

> to develop and implement . . . an occupational information system to meet the common occupational information needs of vocational education programs and employment and training programs at the national, State, and local levels, which system shall include data on occupational demand and supply . . . based on uniform definitions, standardized estimating procedures, and standardized occupational classifications . . . (P.L. 94-482, Sec. 161(b)(1)(B)).

The resulting State occupational information systems were intended to improve State planning for both vocational education and CETA programs.[2]

Responsibility for helping the States to implement the coordination provisions of the 1976 legislation fell to BOAE (later OVAE), which established a CETA coordination unit to provide technical assistance. The subsequent rules and regulations do not illuminate how the SMSC and the SACVE commentaries might be used. Nor do they comment on how coordination is to be treated in the State 5-year plan, except to require a description of the mechanisms for establishing coordination which must include "the criteria developed to avoid duplication under this Act and CETA."[3]

The problem of the misuse of resources first received legislative attention in a provision of MDTA. Under Sec. 302, "maintenance of State effort," MDTA dollars were not to replace vocational education funds provided under the Smith-Hughes or the 1946 Acts. The Congressional and administrative concern over the use of Federal dollars is also to be perceived in the term "duplication of effort," which raises questions concerning the relationship between the VEA and CETA. One of the basic assumptions concerning the duplication of programs is that it is wasteful to conduct similar training and educational programs. This assumption, however, does not take into account the fact that it is difficult to assure a perfect fit between two different programs concerned with the same target population, the economically disadvantaged, neither constant in size nor uniform in needs. The different educational, social, and economic needs of such a population may be best met in many communities by both CETA and VEA programs which on the surface appear to be duplicative. For example, a federally funded VEA program in schools may be identical to one funded by CETA in a community-based organization (CBO), but the first would deal with in-school youth and the second with school dropouts. Thus, the very mix of service programs and services that might be called for could be jeopardized by invoking a simplistic version of the rule that "duplication of effort" is to be avoided.

Coordination Problems

The VEA and CETA may appear to share common educational and training goals, but they are very different in operation. They differ in funding cycles, flexibility in the use of funds, eligibility requirements, planning and accountability requirements, and in other ways that create problems in the administration of programs. It is not surprising that the States were slow in carrying out the coordination requirements for planning. A review of selected 1977 State plans by BOAE stated:

> Many State plans seem to have trouble differentiating between mechanisms for coordination, criteria for nonduplication, and results of coordination. A few State plans just repeat their mechanisms for both criteria and results. Some plans say that close cooperation will result in non-duplication of programs, but they list no criteria which explain how duplications are discovered.[4]

After the CETA terminology changed with the 1978 amendments from "manpower" to "employment and training" programs, many States continued to use the earlier term. Even as late as 1979 and 1980, many States treated CETA briefly in their annual vocational education plans, frequently in a few paragraphs which merely repeated the regulations or discussed the VEA provisions. Maine's 1979 annual plan was exceptional in that it discussed the CETA set asides given to the Governors for vocational education. The State plans are a poor source for determining the States' efforts at coordination. Even though the Governors received $118.4 million from CETA for vocational education in fiscal year 1978,[5] neither this fact nor any information about most of the activities could have been learned from the required VEA State plans.

Coordinated planning requires both knowledge of the resources available from different sources and a strategy for allocating them effectively to meet identified needs. It is difficult to achieve at the State level because State control over local vocational education and CETA program development is at best partial, and because knowledge about available resources is uncertain. Vocational education programs are forward-funded, but CETA programs are not. Thus, State plans may be able to forecast resource needs and the availability of Federal vocational education dollars--but not CETA resources--for a 2-year period. In addition, firm knowledge is also likely to be lacking about the availability of Federal funds relevant to long-range planning decisions under other policies, both educational and economic.

Fundamental to the difficulties of coordinated planning are, of course, the differences not only between the purposes of Federal employment and training and of vocational education policies but also between their administrative features. The Comprehensive Employment and Training Act reserves some of its funds for State Governors and distributes most of its resources through formula to 476 administrative units. These units, called prime sponsors, are located in jurisdictions with 100,000 or more inhabitants, which are usually cities, counties, or consortia of geographic areas.[6] Most of the CETA funds, some $7 billion in fiscal year 1981, bypass the States. Moreover, of this sum, much was earmarked for purposes other than training, such as public service employment. CETA dollars available for education may be used for purposes other than vocational training, such as remedial education and work experience. By contrast, most VEA dollars are distributed by grants to the States which then redistribute them, as has been seen, to eligible recipients which use them in combination with State and local funds. CETA dollars are used by prime sponsors through contracts and agreements with a variety of public and private organizations including community colleges, LEAs, CBOs, and profit corporations. States and eligible recipients which comply with VEA requirements may count upon VEA dollars as entitlements, so to speak. CETA dollars are allocated at the discretion of the prime sponsor. Finally, CETA dollars are specifically and wholly targeted to the economically disadvantaged. VEA dollars are so targeted only in part. The two pieces of legislation, however, differ in their definitions of the economically disadvantaged. CETA employs a much more detailed and inclusive definition, structured differently from the VEA's. For example, being a member of a family that qualified for public assistance makes one eligible for CETA training programs. Under the VEA, the family must have received public assistance. Furthermore, the CETA legislation deals with individuals affected by statutes which act as "significant barriers to employment," such as institutionalized and handicapped persons. The most obvious difference in definition lies in the process of identification. While public education institutions can readily identify persons with academic disadvantages, they do not keep records which show economic disadvantagement.[7]

Differences between CETA and vocational education also appear in the way each is perceived by the officials and practitioners associated with the other, and these are obstacles to coordination. Neither the employment and training community generally, nor the Department of Labor personnel who administer the CETA legislation, work with the VEA definition of vocational education. In the CETA legislation and for recordkeeping purposes, that term stands for all classroom training, wherever it is conducted by either public or private educational institutions or other organizations. In the CETA perspective, vocational education extends broadly to all kinds of educational functions that are classroom based, and the term may refer to a curriculum, a program, or an organization. Thus, a common language for developing coordinated planning has, at least in part, been lacking--a situation which has been an impediment to realizing the coordination objectives of the 1976 amendments.

SACVE-SMSC Developments

These amendments to the VEA called for reciprocal participation in planning, as has been seen. Earlier, SACVEs had discussed coordination with CETA in their annual reports.[8] After 1976, closer relationships between the SACVEs under the SMSC began to develop, and by 1978, the number of SACVEs discussing coordination in their annual reports had risen to 44. A review of 1977 SACVE reports indicated a general desire for clearer definitions of the role to be played by each party involved in the planning process, for improved collaboration between SACVEs and SMSCs at the very beginning of the planning process, and for more compatible data reporting systems.[9]

The activity produced by the required interlocking memberships of the SACVEs and SMSCs led to their greater appreciation of the respective roles, functions, and resources of VEA and CETA programs. By 1979, many prime sponsors felt that a mechanism for comprehensive planning was beginning to emerge in the sense that the components of the planning system had been identified.[10] Consequently, they felt that they could play a more positive part in coordinated planning. The SACVEs were registering the same opinion. The North Carolina SACVE, for example, observed, "This Council believes that the time has come to move on the goals and recommendations of the Annual Report of the SETC from a reactive to a proactive mode."[11] The California Advisory Council on Vocational Education exemplified the idea of an active "mode" by preparing a guide for linking on the local level no less than 60 Federal programs with goals similar enough to those of vocational education to represent potentialities for coordination.[12] By the early 1980s, it was common for State departments of education to issue reports on the status of coordination and how it might be improved.

For example, a recent study conducted in Pennsylvania examined how CETA and educational linkages might be improved. Since coordination is hampered by interpersonal differences, the study suggested that the reasons for the high turnover of CETA staff, a national problem, should be looked into because coordination might be improved if more stable staffing patterns could be achieved. The study also proposed a solution to the problems induced by different fiscal calendars through synchronized joint planning efforts that would allow for "lead time" to develop programs. The study indicated how CETA eligibility requirements, deemed by the educators as too prescriptive, might be relaxed and how the paperwork burden might be lightened by the use of sampling techniques. The study concluded that if CETA could be shielded from political pressures, there would probably be more coordination with public education institutions.[13]

In spite of the progress made, the objectives of coordination between CETA and vocational education programs through planning are still being developed. If the SACVE annual reports for 1979 are to be taken at face value, much of the reason for this would have to be attributed to "footdragging" on the part of State education agencies.[14] Part of the reason, however, may be traced to the way SACVEs viewed the charge given them to review and analyze State employment and training needs. Many justifiably interpreted the legislation as requiring data collection and analysis tasks which they lacked the resources to undertake, rather than an assessment of the information needed for the mandated coordinated planning process by the several parties participating in it.[15]

Incentives for Program Coordination

The adoption of specialized manpower revenue sharing legislation with CETA drastically changed the role of vocational education in Federal employment and training policy. Under MDTA, all classroom training functions had been the responsibility of the Secretary of Health, Education, and Welfare and had been carried out through vocational education programs. With CETA, the prime sponsors were given the resources for entering into contracts with providers of training services. Vocational education lost its preferred position, and its institutions and the school districts in effect had to compete with other organizations, such as CBOs and private vocational schools, for training contracts. It was difficult for the vocational education establishment to "unlearn" MDTA and make the transition to the new system.[16]

Incentives for coordinating VEA and CETA programs are found in the provisions of the CETA legislation and not in the 1976 amendments to the VEA, which, as has been said, place virtually exclusive reliance upon planning processes as a means for achieving coordination. The CETA legislation views education--and not solely vocational education--as a strategic resource. The legislation mentions education in many ways, referring, for example, to LEAs, community colleges, in-school youth, and academic credit. Under the legislation, public schools may run programs for CETA participants or rent their facilities to prime sponsors to be used for vocational training classes, or they may provide basic skill instruction without vocational training. On the other hand, schools have been the recipients of CETA public service employment (PSE) positions, whose occupants work as library aides or bus drivers, for example. For such employees, schools are frequently required to provide training.

The combination of CETA with educational resources to achieve vocational objectives can take a variety of forms. In Modesto, California, for example, the LEA, the prime sponsor, and the State Department of Rehabilitation entered into an agreement to establish a career vocational evaluation center in a mobile testing facility in order to assess the employability skills of handicapped students.

CETA, as amended, had two major incentive mechanisms for coordination with vocational education programs. One resulted from setting aside funds received by the Governors for vocational education. The second set aside funds to be used for a particular population. Both mechanisms were combined in practice.

Under Section 202 of Title II of the CETA legislation, the Governors are required to set aside 6 percent of their funds for vocational education.[17] The uses of these monies are specified in Section 204. This is the legislation's only provision specifically mandating that funds be used for vocational education programs or, for that matter, for any educational program. The unique feature of this set aside is that the funds go to the States, not to the local level, as do most CETA dollars. The Governors' set aside is a holdover from the earlier form of coordination under MDTA which provided assistance to the States. The Governors also receive additional funds to promote linkages among State agencies, known as 1-percent monies, and still other separate funds, known as 4-percent monies, to encourage coordination and the development of special services.

These mandated funds, which are spent in a variety of ways, may be given to State vocational education agencies. For example, the 1-percent monies are frequently not received by State vocational education agencies, but, when they are, they are often used to overcome problems which hinder the administration of joint programs. Thus, they are used to resolve problems of scheduling by creating open-entry and -exit training programs in vocational education, or by establishing regional State placement officers in educational institutions. One State used the 1-percent monies to pay for the staff of a research project on coordination supported by 4-percent monies. These funds have been used for research and development activities, including grants to SOICCs, rather than for those more directly related to coordination, such as the writing of agreements between agencies.[18]

The procedures for administering the Governors' 6-percent monies, established in the 1973 Act,[19] were not changed by the 1978 amendments. There has been great variability in the administration of these dollars on the State level. Some State vocational education agencies have reported that they employ as many as 10 staff persons to deal with CETA coordination.[20] The discretionary use of these funds is exemplified by one State which has only a single prime sponsor. Here the State vocational education agency established a three-member staff to administer the 6-percent monies and was later also given responsibility for administering the 22-percent set aside under the Youth Employment and Demonstration Projects Act. In this State, the prime sponsor combines the Governor's 6-percent and the 22-percent set asides with VEA dollars to run a skills center, illustrating the possibilities of both flexibility and variation in State level administration. Where a single prime sponsor exists, as in this example, coordination is much simpler than in a State where numerous prime sponsors are eligible to receive the Governor's funds.

Evidence in the available studies of coordination strongly suggest that the innovative nature and the administrative flexibility of the CETA legislation have been a source of difficulty in effective coordination because they were often perceived as constituting a lack of Federal direction.

The legislatively mandated agreements between State level CETA and vocational education agencies have not been the most desirable mechanism for spending the 6-percent monies. The differences in funding and planning cycles of the two program areas and uncertainty about the amount of 6-percent monies that would be available created obvious difficulties. No less significant were the frictions arising from differences in the operating styles of the agencies responsible for administering the funds and in their perceptions of how the monies should be spent. Some of these differences went back to the late 1960's, when community action agencies viewed granting funds to State vocational education agencies as concessions to political considerations. The purposes for which 6-percent monies were to be used also led to disputes. Were they to be used to promote communication and coordination, or to enable prime sponsors to purchase vocational education services directly from schools? In some States, these several sources of problems delayed the writing of agreements and forced funds to be carried over from one year to the next.[21]

In the Omnibus Reconciliation Act of 1981, set asides for the Governors' use were reduced from 12 to 10.5 percent of the allotments. This suggests that State vocational education agencies may be in competition for monies with other State agencies, including the SETCs, whose funds are also controlled by the Governor.[22]

The 22-Percent Set Aside

The Youth Employment and Demonstrations Projects Act (YEDPA) of 1976 became Title IV in the 1978 CETA amendments. This measure was targeted toward a particular population, youth aged 16-21, and was categorical in nature. It contained several provisions for coordinating CETA programs with educational organizations. One is known as the 22-percent set aside because it requires that 22 percent of the funds available to prime sponsors under Sec. 343(a)(1) "shall be used for programs for in-school youth carried out pursuant to agreements between prime sponsors and local education agencies . . . ." The legislation and subsequent regulations distinguish among three different "in-school" classifications: (1) *in-school*, meaning "the status of being enrolled full-time and attending an elementary, secondary, trade, technical or vocational school, a college, including a junior community or university;" (2) *in-school program*, meaning "a program which provides either or both career employment experience and transition services to in-school youth;" and (3) *in-school youth*, meaning "a person age 14-21 who is currently enrolled full-time in, and attending, a secondary, trade, technical, or vocational school or junior or community college or is scheduled to attend . . . or has not completed high school and is scheduled to attend . . . a program leading to a secondary school diploma or its equivalent."

Implicit in this threefold classification are different ways of visualizing coordination activities not mandated by law between CETA programs and educational agencies and programs broadly conceived.

However, it is difficult to know what happened as a result. Information about a program is not readily separated from information about the population served. There is, moreover, an obstacle to determining the extent to which Federally funded vocational education serves the needs of in-school youth: the DOL does not collect data which classifies "in-school youth" by the type of program in which they are enrolled. Furthermore, while the CETA legislation elsewhere consistently uses the VEA definition of a LEA, it adopts that of the Elementary and Secondary Education Act for the 22-percent set aside, which, in effect, excludes community and junior colleges from contract arrangements involving these funds. The rationale for this, according to the Director of DOL's Office of Youth Programs, "was that prime sponsors should be forced to at least sit down with public schools rather than avoiding them by going to the community college. We are not discouraging activities with these institutions and expect that with the other 78 percent of the funds these can be financed. But we certainly want to achieve public school-CETA linkage as a minimum."[23] The regulations, however, allow LEAs to subcontract 22-percent set aside funds to 2-year postsecondary institutions.

Under YEDPA, linkage was a fundamental element in reducing youth unemployment, but how much the 22-percent set aside contributed to that end is questionable. The school systems had to agree only on how the set aside funds were to be spent. The monies did not go to the schools; they went to a population served by the schools. Therefore, in theory, the schools could agree to use set-aside funds to establish education programs in community-based organizations, or, as was often the case in practice, to provide stipends for participants in programs. One study suggests that the set aside funds were for the most part used to provide stipends.[24] Prime sponsors used the monies targeted on in-school populations for a variety of purposes. For example, in fiscal year 1979, in Weber and Morgan counties in Utah three school systems, the local State college, and the State and local prime sponsor pooled their funds to augment an existing program for potential and actual school dropouts. Thus, 85 percent of the monies available for funding were allocated to the LEA, although the schools do not directly operate the program. A consortium of the sponsoring school systems, prime sponsors, and the State college operate the skill center in which the program is conducted.[25]

The 22-percent set aside created awareness of the problem of youth unemployment and of the functions that the schools could perform in attacking it. The evidence does not point to enduring changes being brought about in the operations of schools as a result of 22-percent set aside funds. Moreover, it is difficult to characterize the interactions that occurred between prime sponsors and schools. One study concludes that distrust has marked the relationship between the two.[26] Another finds that the 22-percent set aside has "gone a long way toward accomplishing its purpose, an occurrence which is all too infrequent in Federal social programs."[27] One basis for arguing the case for a positive relationship between prime sponsors and public schools lies in the relative ease with which agreements between them are made, compared to those entered into by prime sponsors with other organizations.[28]

A key issue in the relationship between the schools and CETA programs arises from the fact that the latter are remedial efforts designed to benefit the economically disadvantaged and that the training programs provided by prime sponsors are supposed to equip participants with the skills for securing and holding a job. Whether schools are the best providers of education and training for economically disadvantaged youth is a question which is raised in the provisions of CETA, and especially in YEDPA, which call for alternative means of providing the needed education and training.[29] To what extent, then, do the schools represent a Federal strategy for retaining youth in need of training for employment?

The public schools are, of course, heavily involved in remediation efforts. Indeed, the major Federal involvement in education, the Elementary and Secondary Education Act (ESEA), is compensatory in function. The differences between the purposes and the administration of ESEA and YEDPA funds require no discussion here, but it is worth noting that in implementing the ESEA legislation, the Federal Government has gained experience in understanding how to administer compensatory programs in schools. A substantial literature also exists on how to create a change in schools.[30] No equivalent attempt appears to have been made with the implementation of YEDPA to learn about how schools operate, and the resulting lack of knowledge hindered the development of coordination.

On balance, the several CETA set asides acted as incentives to promote coordination between CETA and public education, but they had mixed effects because of the many differences in the ways prime sponsors and public schools provide services to individuals.[31] In some cities, much more than 22 percent of the dollars were allocated to schools for in-school youth programs. In others, 22 percent was the maximum. Administrative procedures and organizational requirements, as has been said, delayed establishing in-school CETA programs. Agreement on giving academic credit for work experience, on scheduling, on the length of the school day, and on graduation requirements had to be reached to permit effective coordination to occur,[32] and all of these issues called for technical assistance effort by the Federal Government.

The mixed effects resulting from the 22-percent set aside could have been anticipated in light of the characteristics of the public school enterprise, the discretionary nature of YEDPA funds, and the fact that one prime sponsor area may embrace many school systems. Funding patterns would vary because, under the legislation, many LEAs with in-school student populations supported by YEDPA funds do not themselves receive such funds. This was illustrated by one balance-of-State prime sponsor in which some 20 staff persons were involved in writing agreements with 300 LEAs, and in which all the funds were used for stipends and none went to the schools for operating programs.

The Flow of CETA Funds

It is difficult to track the flow of CETA dollars to educational organizations and their uses. A Federal level accounting system permitting the aggregation of funds for educational purposes is, moreover, lacking. Much of the information necessary to report on the flow of CETA funds to educational organizations is in the contract and subcontract files of prime sponsors and remains to be collected and analyzed. However, while attempts have been made to determine the financial impact of CETA on public education institutions, the results of these studies are speculative because of problems with the data collection. With the information provided by the Department of Labor on CETA program expenditures and estimates on public school enrollments from the University of California at Berkeley survey, it is possible to make rough estimates of the dollar flow to education. Table V-1 presents these figures. It is safe to estimate total CETA funds for education on the order of more than $1 billion a year at the close of the 1970s.

The number of CETA dollars flowing annually to education broadly conceived is substantially larger than recent Federal annual appropriations for vocational and adult education and make up at least one-eleventh of all Federal expenditures in education. They represent more than one-seventh of the total CETA appropriation for fiscal year 1979, about $6.9 billion dollars. The volume of the CETA dollar flow is impressive, but the funds are primarily directed to serving shorter-term training and employment needs. Moreover, CETA dollars are used by educational agencies or institutions through contractual arrangements which may change from year to year. Consequently, the manner in which

CETA funds are used educationally may not help develop longer-range strategies for deploying Federal resources toward combined--or coordinated--employment and training and educational goals.

TABLE V-1

ESTIMATES OF CETA FUNDS BY TITLE[1] FLOWING TO PUBLIC EDUCATION INSTITUTIONS, FY 1979

Title	Purpose	Estimated CETA Funds[2] (in millions)
Title II A, B, C	General Training Assistance (includes 6% set aside for vocational education)	$265
Title IV	Youth Programs	$ 40
Title VI, IID	Public Service Employment	$485
Titles II, IV	Stipends for In-School Programs	$630

1. Because of the lack of evidence on public school participation in Title III, Programs of National Significance, no estimates are presented.
2. Because of the nature of the estimates and rounding, the total is not additive.

Source: Estimates derived from Department of Labor data on expenditures for classroom training and University of California at Berkeley survey data

CETA dollars enter the vocational education system in four main ways. One is by directly funding vocational education activities, as is stipulated by law in the case of the Governors' 6-percent set asides. A second is by prime sponsors entering into contracts with vocational education institutions for the provision of programs and services. A third is by providing funds or services to individuals to encourage their participation in public education programs, but not supporting directly the operations of educational facilities, as is the case with student stipends. Combinations of two or more of these separate ways are common. The fourth way is to contribute resources to education indirectly in fulfilling other objectives of the legislation, as was the case with providing public service employment positions in educational institutions or agencies.[33]

Large school districts are more likely to receive CETA dollars than small ones, both because of the greater concentration of economically disadvantaged persons in large LEAs and also because large urban LEAs are more likely to be coterminous with prime sponsor boundaries than are small LEAs. It also appears that CETA support for programs for adults and out-of-school youth is more heavily concentrated in postsecondary institutions than in others. The dollars received by LEAs are spent in a variety of ways. They are commonly used to pay stipends for in-school youth, administrative activity, assessment and counseling, instructional activity, job placement, or work experience programs, but the use of the dollars is determined locally. The dollars may act as seed money to put a program together or may fund an entire program or merely a segment of one. It is not uncommon to find funds from a variety of Federal, State, and local services pooled in the local level to establish a program. In Hartford, Connecticut, for example, the LEA pools 11 different funding resources to establish a nontraditional school setting with one academic center and six vocational centers to serve those who have difficulty with the regular system and drop out.[34]

It is difficult to predict the future flow of funds to vocational education. The Omnibus Reconciliation Act of 1981, in addition to eliminating public service employment and changing the set aside to the Governors for vocational education, deletes the maintenance of effort for youth clause under Title II. This could affect the flow of funds to youth. The total authorization for training purposes is approximately $3.8 billion, but it is generally assumed that appropriations for fiscal year 1982 will fall below that level.

Administering Coordinated Programs

Problems in program coordination between vocational education and CETA arise for several reasons, as has been seen. The central source, however, is embedded in differences between the two in their purposes, in the administration of funds, and in their mechanisms for effecting coordination.

In the 1976 amendments to the VEA and CETA and the subsequent regulations, the directions for installing a process for coordinated planning are clear. What is not altogether clear is exactly what it is that is to be planned in programmatic terms. Coordination in the CETA context is a product of the decentralization of decisionmaking on training and employment needs. This requires local level planning attentive to all considerations that could affect these needs. The legislation according to its Statement of Purpose is designed

> to provide for the maximum feasible coordination of plans, programs, and activities under this Act with economic development, community development, and related activities such as vocational education, vocational rehabilitation, public assistance, self-employment training, and social service programs (P.L. 95-524, Sec. 2).

Compared with the coordination under VEA, that called for by CETA is enormously more complex.

Prime sponsors are, in effect, the brokers of Federal revenue-sharing funds allotted to the States. The funds prime sponsors receive are to be spent on the training and other needs of a particular population in a specific area. Prime sponsors are required to submit plans to the Department of Labor detailing how the training needs are to be met, what coordination activities they will pursue, and what agreements they will write with other organizations, including educational agencies and institutions, for providing the training and related services required.

The agreements are administrative mechanisms which may be financial, as in the case of a contract with a LEA which provides for a vocational training program, or nonfinancial, as in the case of a 22-percent set-aside agreement with a LEA which provides stipends for in-school youth. Agreements may also take the form of memoranda of understanding or grants. To simplify the accounting of funds, the DOL requires prime sponsors to be responsible for reporting on how much money is spent on populations and programs, but not on the kinds of organizations which provide services.

Prime sponsors enter into numerous agreements, although in theory there are other administrative mechanisms such as set asides or direct funding, which could replace the agreements process. For example, in fiscal years 1975 and 1976, the State of West Virginia alone entered into 536 funded contracts through which almost 3,200 individuals were enrolled in an on-the-job training program.[35] The Michigan Employment and Training Service Council's Report to the Governor for 1978 shows that the States' 22 prime sponsors made 529 contracts and agreements with other agencies, of which 38 percent were entered into with educational agencies and institutions.[36] In a study of CETA's relationship to vocational education, the 50 prime sponsors surveyed reported that they had entered into more than 1200 agreements of different kinds with public vocational education agencies and institutions (see Table V-2).

The number of agreements made annually by prime sponsors with public and private educational institutions, CBOs, vocational rehabilitation agencies, labor organizations, and industrial corporations must

TABLE V-2

DISTRIBUTION OF AGREEMENTS AMONG 50 SELECTED PRIME SPONSORS WITH PUBLIC VOCATIONAL EDUCATION AGENCIES AND INSTITUTIONS

Form of Agreement	No. of Financial Agreements	No. of Nonfinancial Agreements
Contract	667	37
Grant	25	2
Memorandum of Understanding	140	226
Other	16	95
TOTAL	848	360

Source: U.S. Conference of Mayors, CETA/Vocational Education Coordination: A Status Report

run into the tens of thousands. Since information on agreements is not collected either by the Department of Labor or its regional offices, it has not been possible to examine systematically the comparative efficacy of the different forms of agreements. The frequency with which they have to be made, however, does raise problems for coordinated planning activities which should, at least in theory, be developing strategies for matching the training and employment needs of individuals with the programs and agencies for meeting them. Achieving an effective functional fit between identified needs and available resources for meeting them may often require that other Federal policies, such as those dealing with vocational rehabilitation, public assistance, or economic development, be considered in State and local planning processes. Whether this can be assured by the present requirements for coordination in planning in VEA and CETA legislation is one question. A far more important question than the composition of planning bodies is that of the functional and reciprocal relationships among separate Federal policies, each one of which is concerned in different ways with human resource development, employment and training, equity, and antipoverty objectives.

Concluding Observations

Determining the functional and reciprocal relationships between vocational education and CETA programs remains the central problem underlying coordination of the two, a problem that involves questions of policy far more than of administrative procedure or process. Are vocational education and CETA training programs to be viewed as alternative or as complementary routes for the acquisition or further development of occupational skills? Should CETA represent a second option open to all individuals to prepare for participation in the labor market, or only to those economically disadvantaged? If vocational education programs, particularly at the secondary level, are to continue to represent the first option for such preparation, open to all individuals, should VEA funds, in contrast to State and local funds, be used only for the benefit of populations which lack equal opportunities for vocation education? If completion of school programs contributes to subsequent employment, how could vocational education and employment and training programs be used separately and in combination to best bring about this result in ways other than providing stipends to in-school youth? Should the provision of alternative programs or schools designed to reduce dropout rates be made a CETA responsibility? Should CETA funds be used to provide school placement services for completers of secondary vocational education programs? Answers to these and similar questions, having to do with the nature of the functional and reciprocal relationships between the programmatic features of two policy structures, would define the boundaries of coordination in planning.

Requirements for the membership of representatives from the employment and training and the vocational education communities upon each others' planning bodies cannot in themselves assure that such matters either find a place upon their agendas or, if they do, can be authoritatively answered. In the light of that consideration, it should not be surprising that the significant advances made in program coordination since the adoption of the 1976 amendments to CETA and VEA owed far more to CETA than to the 1976 amendments to VEA.

The VEA amendments, concerned almost exclusively with coordination in State planning, produced the least programmatic activity. The legislative provisions for coordination in planning set general and symbolic goals, but offered no incentives in calling upon agencies and institutions largely unfamiliar with one another's operations to work together. Different planning and funding cycles, as has been said, impeded coordination. Moreover, BOAE's implementation of the VEA planning requirements focused on formal compliance and provided the modest technical assistance to encourage coordination with CETA.[37] The regulations emphasized that the State plan must demonstrate that there is no duplication of effort but did not invite delineating a strategy for deploying Federal resources. The major accomplishment of the VEA coordination requirements was to enable State level components of the VEA and CETA communities to become familiar with each other's operations.

The more important developments in program coordination on the State and local levels were stimulated by CETA provisions permitting or requiring funds to be channeled to vocational education. For the most part these funds, authorized under different CETA titles, have been used flexibly and in combination, serving ends determined by the decentralized decisions of prime sponsors. What is extremely difficult to assess are the effects of CETA programs and funds on secondary and postsecondary vocational programs and institutions. CETA dollars that pay stipends do tend to hold students in school, but whether they produce other consequent results is not known. The flow of YEDPA dollars did lead schools to examine and even change graduation requirements, scheduling practices, and ways of serving economically disadvantaged and other students. The extent and permanence of these effects, however, cannot be indicated.

On balance, it is safe to say not only that coordination between CETA and vocational education programs [illegible] increased since 1976 but also that the terms of existing legislation and the consequent administrative procedures inhibit further gains that could be achieved through the strategic deployment of all Federal resources. It may well be that the most important signal for program coordination provided by the VEA and CETA amendments of 1976 is the task given to the National Advisory Council on Vocational Education, the State Advisory Councils on Vocational Education, and the National Commission on Employment Policy: to identify training needs and assess the extent to which all the programs conducted under all the pertinent Federal programs "represent a consistent, integrated, and coordinated approach to meeting such needs. . . ." This charge may be said to invite the adoption of a new conception of a comprehensive and unified Federal policy for human resource development and employment.

FOOTNOTES

1. The Bibliography includes full listings of the reports and documents pertaining to program coordination between CETA and VEA that were used in preparing this chapter.

2. The designated participants in NOICC were originally the Commissioner of Education, the Administrator of the National Center for Education Statistics, the Commissioner of Labor Statistics, and as noted, the Assistant Secretary of Employment and Training; but no official or agency is named as responsible for coordination at the Federal level.

3. Sec. 104.188 of the VEA regulations.

4. Chris Vogel, "CETA Coordination Study," unpublished (Central Branch, DSOPO/BOAE, U.S. Office of Education, November 8, 1978).

5. Analysis of Titles I, II, and IV of the Comprehensive Employment and Training Act of 1973 for Fiscal Year 1978, mimeographed (Washington, D.C.: Office of Community Programs, Employment and Training Administration, U.S. Department of Labor, May 1979), p. 21.

6. For geographic areas of under 100,000 persons or in small States, the prime sponsors are referred to as balance-of-State primes. They represent only 53 of the present 476 prime sponsors. State Governors are also designated as prime sponsors for counties with fewer than 100,000 population. Counties comprise the largest category, with 203 primes, and consortia next, with 143 primes; cities follow, with 71. There are also four prime sponsors which deal with the Consolidated Employment Programs which are categorized separately by the Department of Labor.

7. See Chapter II above for the VEA categories of economic disadvantage as well as the Federal Register, Vol. 42, No. 191, Oct. 3, 1977, p. 33864. Concerning the CETA eligibility requirements, see Federal Register, Vol. 44, No. 65, April 3, 1979, p. 19998.

8. Overview: 1977 Reports of the State Advisory Councils on Vocational Education (Washington, D.C.: National Advisory Council on Vocational Education, November 1978), p. 18.

9. Overview: 1978 Reports of the State Advisory Councils on Vocational Education (Washington, D.C.: National Advisory Council on Vocational Education, November 1979), p. 14.

10. CETA/Vocational Education Coordination: A Status Report (Washington, D.C.: U.S. Conference of Mayors, November 1979), p. iii.

11. A Time to Design, Annual Report of the North Carolina State Advisory Council on Vocational Education, mimeographed (October 1, 1980), p. 49.

12. A Guide for Linking Comprehensive Vocational Services (Sacramento, California: Advisory Council on Vocational Education, n.d.).

13. Nicholas C. Brown, Improvement of CETA/Educational Linkages (Bureau of Research and Evaluation, Pennsylvania Department of Education, October 1980), pp. 49-56.

14. Overview: 1979 Report of the State Advisory Councils on Vocational Education (Washington, D.C.: National Advisory Council on Vocational Education, January 1981), p. 8.

15. Report on a Survey of State Advisory Councils on Vocational Education, National Association of SACVE Executive Directors, May 1981, p. 7.

16. The Impact of CETA on Institutional Vocational Education: An Update 1976 (Washington, D.C.: National League of Cities/Conference of Mayors, 1976), p. 9.

17. Prior to the 1978 amendments to CETA, it was 5 percent. The information currently available is limited to the 5 percent monies.

18. Vernon L. Beuke et al., Implementation of the Education Amendments of 1976: A Study of State and Local Compliance and Evaluation Practices, prepared under NIE contract no. 400-78-0041, (Cambridge, Massachusetts: Abt Associates, Inc., December 1980), pp. 112-115 (hereafter cited as The Abt Report.)

19. They are not simple. CETA funds are first allocated to the Governors. Although they may keep a small percentage for administration if they so choose, they in turn notify in writing the State vocational education board and each prime sponsor of the funds available within a prime sponsor's area. The prime sponsor then develops a nonfinancial agreement with the State vocational education board planning for the expenditure of the funds from the Governor by the State vocational education board in the prime sponsor's area. See P.L. 95-524, Sec. 204(a)(1). Also, Federal Register, Vol. 44, No. 65, April 3, 1979, p. 20041.

20. CETA/Vocational Education Coordination: A Status Report (Washington, D.C.: U.S. Conference of Mayors, November 1979), p. 35.

21. The Abt Report, pp. 115-118.

22. U.S. Congress Conference Committee, Omnibus Reconciliation Act of 1981, 97th Congress, 1st Session, p. 771.

23. Report on Joint DHEW/DOL Youth Employment and Demonstrations Project Act Workshops (Washington, D.C.: Office of Youth Program/ Employment and Training Administration, U.S. Department of Labor, n.d.), p. 34.

24. William H. Wilken and Lawrence L. Brown, III, Manpower-Education Coordination: Two Decades of Frustration, Technical Analysis Report No. 4 (Washington, D.C.: Office of Technical and Analytic Systems, Office of Planning and Budget, U.S. Department of Education, January 1981), p. 29.

25. Robert J. Ivry and Alan Weisberg, "The 22% Solution: LEA/CETA Collaboration on Youth Employment and Training Programs," unpublished draft (Washington, D.C.: Office of Career Education/U.S. Department of Education, August 1980), p. 17.

26. See Richard R. Elmore, "The Youth Unemployment Delivery System," in A Review of Youth Employment Problem, Programs, and Policies, Vol. 3 (Washington, D.C.: Vice President's Task Force on Youth Employment, 1980), p. 10.

27. Ivry and Weisburg, op. cit., p. 2.

28. Sam Andrew, Paul Harrington, and Glen Schneider, CETA Prime Sponsor Self-Review Knowledge Development Report 3.20 (Washington, D.C.: Office of Youth Programs, Employment and Training Administration, U.S. Department of Labor, May 1980).

29. Robert Taggart and Gregory Wurzburg, "The Role of Vocational Education in the Nation's New Youth Employment and Training Programs" (Paper presented at "Vocational Education Addresses Unemployment--Program and Policy Alternatives," Washington, D.C., November 9-11, 1977).

30. In particular, see Paul Berman and Milbrey McLaughlin, Federal Programs Supporting Educational Change, Vols. I-V (Santa Monica, California: The Rand Corporation, 1975). See also Seymour Sarason, The Culture of the School and the Problem of Change, (Boston: Allyn and Bacon, 1971).

31. Gregory Wurzburg, Youth and the Local Employment Agenda: An Analysis of Prime Sponsor Experience Implementing the Youth Employment and Demonstration Projects Act (Washington, D.C.: National Council on Employment Policy, January 1980), p. 3.

32. Impact of YEDPA and Education/CETA Relationships at the Local Level: Five Case Studies, Office of Youth Programs Special Report No. 1 (Paper prepared jointly by representatives of the Department of Health, Education, and Welfare and the Office of Youth Programs, Department of Labor, August 1978), p. 4.

33. Table V-1 shows an estimated $485 million in public service employment funds. During 1979, PSE became the largest CETA program, accounting for more than half of all CETA funds. One study estimates that public education accounts for only 19 percent of total PSE positions, and of that share, only 6 percent were involved in teaching and related activities. On the other hand, parks and recreation and public works projects accounted for 54 percent of the PSE positions. See William Mirengoff et al., CETA: Assessment of Public Service Employment Programs (Washington, D.C.: National Academy of Sciences, 1980), p. 147.

34. Sally Bower et al., A State-of-the-Art Report: Case Studies of Vocational Education - CETA Title IV Programs, Vol. 1 (Raleigh, N.C.: Conserva, Inc., 1980), p. II-45.

35. Annual Report to the Governor (Charleston, West Virginia: West Virginia State Manpower Services Council, 1976), p. 26.

36. 1978 Report to the Governor (Lansing, Michigan: Michigan Employment and Training Services Council, 1979), p. 60.

37. See The Interim Report, Chapter IV.

CHAPTER VI. CONSUMER AND HOMEMAKING EDUCATION

Introduction

Since the adoption of the Smith-Hughes Act of 1917, home economics education has been partially supported by Federal vocational education funds. Under the Education Amendments of 1976 (P.L. 94-482, Subpart 5, Sec. 150 (a)), the Federal Government provides grants to States for Consumer and Homemaking Education (C&HE) programs. These funds are to be used

> solely for (1) educational programs in consumer and homemaking education consisting of instructional programs, services, and activities at all educational levels for the occupations of homemaking including but not limited to, consumer education, food and nutrition, family living and parenthood education, child development and guidance, housing and home management (including resource management), and clothing and textiles which (A) encourage participation of both males and females to prepare for combining the roles of homemakers and wage earners; (B) encourage elimination of sex stereotyping . . . ; (C) give greater consideration to economic, social, and cultural conditions and needs especially in economically depressed areas. . .; (D) encourage outreach programs in communities for youth and adults giving considerations to special needs such as, but not limited to, aged, young children, school-age parents, single parents, handicapped persons, educationally disadvantaged persons, and programs connected with health care delivery systems, and programs providing services for courts and correctional institutions. . . .

In addition to their use in educational programs, the grants to States may be spent for ancillary services designed to assure the quality of all homemaking programs. The authorized ancillary services are teacher training and supervision, curriculum development, research, program evaluation, special demonstration and experimental programs, development of instructional materials, exemplary projects, provision of equipment, and State administration and leadership.

States must use at least one-third of the Federal money "in economically depressed areas or areas with high rates of unemployment for programs designed to assist consumers and to help improve home environments and the quality of life" (Sec. 150(d)). While State and local funds are usually required to pay for at least half the amount spent on C&HE programs elsewhere, in economically depressed areas Federal funds may be used to meet 90 percent of these costs.

Clearly, the special beneficiaries of C&HE programs are persons who are expected to suffer most because they lack the knowledge to make sound decisions as consumers or to perform homemaking functions effectively. The programs are also designed to prepare men and women for the dual roles of homemaker and wage earner. All students are expected to benefit from C&HE programs by acquiring knowledge and skills which can contribute to improved home environments, consumer decisions, and family life. Furthermore, it is hoped that by supporting ancillary services, Federal funds may indirectly influence educational programs on which Federal funds are not being spent.

Home Economics, Consumer and Homemaking Education, and Federal Policy

The ends served by C&HE programs under the Federal vocational education legislation of 1976 are consistent with the objectives of home economics education and professional services as they developed from the close of the 19th century on. Home economics was initially a women's curriculum. With the growth of cities and industry and the swelling tide of immigration, schools assumed some of the responsibilities for the socialization of the child that had previously been borne by the family and community, and courses in homemaking became a logical addition to the public school curriculum. They were viewed as a means of preserving and strengthening family values during a period of rapid social change. From 1899 to 1908, Ellen Richards, one of the strongest proponents of a domestic science curriculum in an expanding public education system, held a series of meetings known as the Lake Placid Conferences, through which home economics as a field grew in stature and scope and developed a national constituency. To Ellen Richards, home economics involved applying economic and scientific knowledge to the management of the home and family and to their spiritual nurturing and cultural strengthening. Its aims transcended the practical courses in food preparation or clothing construction available at the time. She hoped that through home economics, with its distinctive philosophy, the knowledge of such different disciplines as economics, biology, psychology, and sociology, for example, would be integrated to serve a new purpose.

Even before the passage of the Smith-Hughes Act of 1917, the coalition of interest groups from education, business, and labor advocating Federal aid for vocational education included a champion of vocational education for females in the National Education Association (NEA). In 1910, it had issued a statement declaring that the primary aim of vocational education for females was "to enable them, thru the right sort of homemaking training to enter homes of their own, able to assume the most sacred duties with an intelligent preparation. . . ."[1]

In 1914, the Commission on National Aid to Vocational Education, which had been appointed by President Wilson, recommended Federal funding for the education of home economics teachers so that home economics courses could be offered in elementary and high schools. The Smith-Hughes Act reflected this recommendation. Home economics was one of four subject areas funded under this Act, the other three being agricultural, trade, and industrial education. The Federal grant to the State was to be used for teachers' salaries and teacher training. The home economics programs were to be offered under the supervision of the

State, to adult homemakers as well as to youth both in and out of school.

A major rationale for the inclusion of home economics in Federal legislation designed to encourage the growth of vocational education at the secondary level was stated in a Federal circular published in 1918: home economics "finds its place in the school curricula because it furnishes vocational education in that occupation in which 93% of all American women ultimately engage. . . ."[2]

During the 1920's support for home economics grew, spurred in particular by organizations interested in strengthening the family and countering the rise in divorce rates after the First World War. Among these were the Parent Teacher Association and the Child Study Association of America. The American Home Economics Association expanded its concerns to include child care and parenting, and the subject matter of child care was incorporated into the home economics curriculum in 1925.

The next important Federal vocational education measure, the George-Reed Act, was adopted in 1929. It authorized additional funding, above the levels provided by the Smith-Hughes Act, for agricultural and home economics education. It also changed the basis for the home economics allotments to each of the States. Under the 1917 Act, they had been determined by the ratio of a State's urban population to the total urban population of the United States. Under the George-Reed Act, they were determined by the ratio of a State's rural population to the rural population of the United States.

The George-Deen Act of 1937 greatly increased the level of funding for home economics and again gave it the same level of funding as agricultural, trade, and industrial programs. The Act also required State or local matching funds to increase in stages from 50 percent after

1938 to 100 percent after June 30, 1946. Federal funds for home economics continued to be allotted on the basis of rural population, but they were no longer to be spent on teacher training.

The George-Barden Act of 1946 further increased the level of funding for home economics, but at a level lower than that for agricultural programs, and continued the allotment on the basis of rural population. The ban against using Federal funds for teacher training also continued, but in other respects the States were given greater discretion in the use of their grants. Earlier legislation spoke of "cooperating" with the States in order to effect the further development of vocational education. The 1946 Act spoke of "assisting" the States for that purpose.

The Vocational Education Act of 1963 constituted a change in Federal vocational education policy. For home economics education, the Act departed from the tradition of a separate authorization and left it to the States to decide how much was to be spent on that subject area out of a total grant determined by a formula based on age groups in the population and per capita income. Another change provided that funds allocated to home economics could be used "to fit individuals for gainful employment in any occupation involving knowledge and skills in home economics subjects" and that, beginning with fiscal year 1966, at least 10 percent of home economics funds had to be used in that manner.

The 1968 Amendments to the Vocational Education Act of 1963 changed significantly the provisions affecting home economics education, now called "Consumer and Homemaking Education." Part F of the 1968 legislation authorized separate appropriations for Federal grants in support of programs in this subject area. For the first time, it called for home economics to be attuned to "social and cultural conditions and needs, especially in economically depressed areas," emphasized preparation of youth and adults for the "dual role of homemaker and wage earner," and included consumer education in the home economics curriculum. It also authorized a match ratio of 10 State or local dollars to 90 Federal dollars for the amounts spent in economically depressed areas and required at least one-third of the Federal funds to be spent in such areas as those with high rates of unemployment, to assist consumers "and to help improve home environments and the quality of family life." Thus, the 1968 Vocational Educational Amendments anticipated many key elements of the Consumer and Homemaking Education provisions of the 1976 legislation.

State and Local Responsiveness to the 1976 Federal Legislation

Part A, Subpart 5, of the Education Amendments of 1976 goes well beyond the preceding legislation in specifying the subject matter of Consumer and Homemaking Education programs, the ends they are to serve, and the groups most in need of the knowledge and skills they can provide. One key question inherent in the statute's charge to the NIE to review and evaluate "the effectiveness of programs funded under subpart 5 of Part A" is the extent to which the C&HE systems on the State and local levels are responsive to the intent of the law, particularly with respect to the subject matter taught and the targeted groups of students. A second key question is whether C&HE programs make a difference to learners. A third set of questions, implicit in the first two, concerns the degree to which Federal policy and its implementation, distinct from State and local factors, affect responsiveness to the Act and even the characteristics of C&HE programs that do not directly receive Federal funds.[3]

Subpart 5 indicates priorities among content areas and populations with special needs, but it does not limit federally funded programs to the specified content areas or groups. The language of the law ("including but not limited to") is indicative, not prescriptive. It permits States to choose to use Federal funds either to maintain traditional programs or to promote change in the direction of the specified content areas and populations. The Act indicates preferred behavior, and the term responsiveness means, in this context, correspondence between that preferred behavior and State and local C&HE programs, practices, and activities.

Since the law is permissive, it should not be surprising that NIE's study found the degree of responsiveness to vary considerably among States. The fact that C&HE program activities more closely mirrored the law in some States than in others prior to 1976 also contributed to the present variability in responsiveness among the States.

What Is Taught?

Table VI-1 shows the frequency with which courses in the six content areas were offered in 1978-1979, according to a recent survey of 1,147 secondary schools in 41 States. Comprehensive C&HE, a survey course covering all six subject areas, is the most frequently offered course, and from 1972 to 1978 it had higher student enrollment than courses in any one of the six content areas in the 10 States studied by the NIE.[4] Nevertheless, enrollment in comprehensive courses decreased during these years from 60 to 31 percent of total C&HE enrollment in those States. From 1972 to 1978, enrollment in food and nutrition and in clothing and textiles courses remained the highest of the six content areas. Food and nutrition enrollment rose from second to highest in that period; enrollment in consumer education remained the lowest.

In addition to enrollment figures, data on course duration give some indication of students' exposure to different kinds of subject matter. A recent study in Minnesota indicates that the total number of hours of instruction was greatest in food and nutrition and clothing and textiles and least in consumer education courses.[5]

TABLE VI-1

SECONDARY SCHOOL COURSE OFFERINGS IN 41 STATES, 1978-79

Course Title	Schools Offering Course N	Schools Offering Course %
Comprehensive C&HE	860	75
Food and nutrition	766	67
Clothing and textiles	732	64
Housing and home furnishings and home management	701	61
Family relations	698	61
Child development	631	55
Consumer education	409	36

Source: Hughes, Rougvie, and Woods, The National Census Study of Secondary Vocational Consumer and Homemaking Programs

Course enrollments and duration, however, are only partial indicators of the extent to which students are exposed to different types of C&HE subject matter. Consumer education topics, as well as others emphasized in the legislation, are included in a variety of C&HE courses; they are not confined to courses with the specific subject matter label.[6] For example, at least half of the consumer education and management topics listed in the survey of 41 States were taught in C&HE programs in 80 percent of the schools covered, though not necessarily in consumer education classes. However, students enrolled in a consumer education course are more likely than those in a comprehensive course to be taught the full range of consumer education topics.[7]

Two kinds of C&HE programs were found in the NIE study to be especially responsive to the aims of the Act--outreach programs for adults and "adult living" courses for high school students. Both programs typically incorporate the four areas given special emphasis in the law; namely, consumer education, management of resources, nutritional knowledge and food use, and parenthood education. Adult outreach programs are highly dependent on Federal funds and provide needed information, such as consumer education, to poor people. Adult living courses, which are relatively new but are becoming increasingly common, are survey courses designed to provide high school juniors and seniors with knowledge that will help them to function effectively as adults. The subjects taught include family relations, careers, and decisionmaking involving money, food, housing, and children. Adult living courses frequently attract male students and do not require previous course work in C&HE.

Who Are the Students?

More students were enrolled in C&HE programs between 1972 and 1979 than in any other vocational education program field. Of the 1.4 million students enrolled in C&HE programs in the 10 States in 1979, 66 percent were secondary school students, 32 percent were in adult programs, and 2 percent were postsecondary students.[8]

Nationwide, a total of 3.7 million students were enrolled in C&HE in 1979, of whom 75 percent were secondary school students, 24 percent were in adult programs, and 1 percent were postsecondary students. Data from the Office for Civil Rights indicate that in 1979, 70 percent of C&HE students in high schools, junior and community colleges, and area vocational centers were Caucasian, 22 percent were black, and 8 percent were Hispanic, Native American, or Asian American.

Enrollment in C&HE programs in the 10 States increased by 17 percent between 1972 and 1979.[9] The growth is chiefly attributable to a threefold increase in male enrollment--it rose from 6 percent in 1972 to 19 percent in 1977. Since the increase occurred by 1977, it was, according to local school administrators, the result of Title IX of the Civil Rights Act of 1972, which prompted schools to eliminate segregation of students by sex, rather than the result of P.L. 94-482.[10] Female enrollment did not change during this period.

Although females comprised the large majority (80 percent) of C&HE students in 1978, it is possible that C&HE programs lost some female enrollment to occupational home economics; enrollment in occupational home economics increased by 64 percent in the 10 States from 1972 to 1979, while C&HE enrollment increased by only 17 percent.

Another noteworthy development in these States was the 59 percent increase in enrollment in adult programs from 1972 to 1978, in contrast to the 2 percent increase in secondary enrollment.[11] Adult participation rose in 6 of the 10 States.

Adequate data on enrollment of the special populations listed in Subpart 5 are lacking. Programs in the 10 States for these populations are usually outreach programs offered either in school, with instruction tailored to the needs of the group, or in community settings, most often in urban areas "where liaisons with a social service network facilitate identifying and recruiting students with special needs."[12] Of the populations listed, the "educationally" disadvantaged and the elderly are the most extensively served in these States. Educationally disadvantaged persons are defined by these States as inhabitants of economically depressed areas; there is no separate test to determine disadvantaged status. Out-of-school programs for this group typically are offered in cities and make use of paraprofessionals who live in communities in which the programs are offered. Instruction focuses on problems relating to family life, budgeting, landlords, home repairs, and consumer decisions. Outreach programs for the elderly are usually set up in community centers or housing projects and emphasize effective nutrition at minimal cost, budgeting, and consumer skills.

Handicapped persons participate in C&HE programs in school as well as in community human services or health care agencies. In some States, C&HE teachers take part in programs for deinstitutionalized handicapped adults, providing instruction in consumer skills, cooking, and grooming. Most of the 10 States have sponsored inservice training sessions to prepare teachers to teach students with special needs, particularly in mainstreamed settings. Two of them have published guides for teaching the handicapped.

Instruction for school-aged parents, usually in child development and parenting skills, is given where there is local support for this kind of program. Few C&HE programs specifically for single parents were found, but this population overlaps with others named in the law, as well as with "displaced homemakers." Programs for young children or inmates of correctional institutions were also relatively few in number, as were C&HE programs conducted in connection with health care delivery systems.

Exemplary outreach programs for special populations appear to share the following characteristics: The content is tailored to the needs of the group or groups for whom the program is designed. The program is conducted outside of the secondary school system with at least one staff member responsible for planning, instruction, recruiting participants, and serving as liaison between the program and social service agencies. Community residents are used as paraprofessionals in the program. The program operates within a network of public and private agencies that serve the group. Time is required to develop exemplary programs: most of those found were at least 10 years old.[13]

Does C&HE Make a Difference to Learners?

The body of research on the effects of C&HE programs on learners is small.[14] Studies conducted in the last 10 years designed to show whether C&HE courses affect the knowledge of C&HE subject matter, the attitudes, or the behavior of those participating in them were identified and examined. Most of the research studies were conducted with small numbers of high school students (30-100) enrolled in classes in one of the six content areas. Few studies have been conducted with the target groups specified in Subpart 5. Not only is the body of research small, but the findings are also sometimes inconclusive.

There is reliable evidence that learners' knowledge of certain content areas improved after taking one or more C&HE classes. Significant improvement in knowledge was reported in the areas of child development (four studies including one with mildly mentally handicapped students),[15] nutrition (two studies),[16] family living (one study showing males improved),[17] and metric measurement[18] and parenting[19] taught in comprehensive home economics classes (one study each). Knowledge of small business ownership among students in three secondary C&HE programs was found to improve after participation in an experimental unit in entrepreneurship to a greater extent than that of a control group of C&HE students.[20]

Studies of the effects upon knowledge of consumer education have produced varied results. One, a study of disadvantaged students in 128 school districts, showed that students who had participated in C&HE programs scored significantly higher on a test of consumer knowledge than students who had not.[21] A second study involving high school students showed no significant difference in knowledge of consumer education subjects between those who had studied consumer education in home economics courses and those who had not.[22]

In a study which assessed knowledge of low-income adults in all areas of C&HE before and after participation in a C&HE program, the greatest gains were made in knowledge of clothing and textiles, but reported gains were not statistically significant.[23] Yet a study of changes in high school students' knowledge of many consumer and homemaking education topics showed significant improvement after they had taken a comprehensive nonlaboratory course called "Adult Roles and Functions."[24]

Three studies sought to determine whether changes in attitude could be attributed to participating in high school C&HE courses. They focused on changes in students' self-concept and expectations of marital roles. Two studies reported that students' expectations regarding marital roles had not significantly changed as a result of taking a child development course.[25] The third study found that a group of students who had taken a course in family living expected to be significantly more egalitarian and less authoritarian in their marriages than a control group which had not.[26] All three studies showed no significant change in self-concept, but this result is understandable: such a change should not be expected as a consequence of participation in a C&HE course. Still another study reported that confidence in performing homemaking tasks was greater among adults who had been enrolled in high school home economics classes for 3 years than among those who had had fewer years of instruction.[27]

Only a few studies have investigated the effects of C&HE courses on the behavior of students. In one, a high school teacher observed that several students who had taken a 6-week unit in child development volunteered to work with children outside of class.[28] Another surveyed students who had been enrolled in a high school clothing class within the preceding 5 years and found that respondents who had not learned about managing credit reported using credit more frequently than those who had.[29] A third behavioral study administered a questionnaire on purchasing habits to adults who had taken one or more C&HE courses in a community college and to others who had not. It found that the purchasing decisions of former C&HE students reflected knowledge of principles of consumer education to a significantly greater extent than those of students who had not taken C&HE.[30]

There are studies that report that former C&HE students found the subject matter they had learned later turned out to be very useful. Yet if the effectiveness of C&HE programs is assessed by the degree to which measurable positive changes in the knowledge, attitudes, or behavior of students can be attributed to participating in C&HE courses, the research conducted thus far invites a suspended judgment.

There are several reasons for this conclusion. Most important, perhaps, is the small number of methodologically sound studies conducted, particularly of any one content area. In the existing body of research, precise explanations of what was done that produced a measurable change are often lacking; and there is little documentation of outcome measures, so that it is not always clear what is being measured. Furthermore, sample sizes in all except a few studies are small. Clearly, the problem of the effectiveness of C&HE programs has yet to receive systematic investigation from experienced researchers.

The Federal Role in Promoting State and Local Responsiveness

State and local dollars pay a far greater share of the cost of C&HE programs than do Federal funds. In fiscal year 1979, Subpart 5 funds accounted for 8 percent of the $479 million spent nationwide in support of C&HE.[31] From 1972 to 1979, Federal support for C&HE increased 54 percent nationally, but State and local support increased 119 percent.

Does the relatively small amount of Federal funding prompt or encourage States and localities to be responsive to Federal goals? The answer to this important question is somewhat complicated.

The Act says that States may use Federal grants for C&HE programs which, among other things, "encourage outreach programs in communities for youth and adults giving considerations to special needs. . . ."

Often these special populations are not enrolled in secondary school, the traditional setting for C&HE instruction. Therefore, to be responsive to this emphasis of the statute, States would have to devote a portion of their total C&HE funding to establishing (or maintaining) programs aimed at adults and out-of-school youth who could be taught through community-based programs.

Federal funds often constitute the only means available to States desiring to establish or maintain the newer programs emphasized in the law. In the past, State and local funds were generally committed to the support and improvement of existing secondary programs, and local districts grew accustomed to and dependent upon this support. The professional C&HE network, composed primarily of secondary teachers and the educators of these teachers, is organized in professional associations which stand ready to lobby State legislatures in the event of a threat to withdraw funds. Moreover, in the face of fiscal crises at the local level, district administrators are generally eager to use whatever State and local money is available for secondary programs and are reluctant to support new programs, such as those for disadvantaged adults, for example. Consequently, it is difficult for States to divert State and local monies from secondary programs to fund new programs for disadvantaged adults or other special populations. Under these conditions, Federal funds assist States that seek to depart from traditional programming to mount and maintain the newer programs emphasized in the law. In short, Federal funds can promote responsiveness to Federal goals.

As has been seen, there are other incentives in the legislation for States to broaden the focus of C&HE and introduce the kind of innovative programs encouraged by the Act. At least one-third of the Federal funds is reserved for use in areas that are economically depressed or marked by high rates of unemployment. For C&HE programs "to assist consumers and to help improve home environments and the quality of family life" in such areas, as the statute puts it, 90 percent of the expenditures may be accounted for by Federal funds.

Federal funds also play an important role in supporting ancillary services such as inservice training, design of new programs for in-school special populations, and payment of salaries of C&HE supervisory personnel. New programs often require frequent monitoring and intensive supervision, for which Federal funds pay part of the cost. This assistance also contributes to the strength of efforts that depart from the traditional. Given the weight of conventional practices and the constraining influences of limited State and local fiscal resources, Federal money often provides the only means available with which local districts can experiment and develop activities that are consistent with Federal priorities.

Programs for Adults

In the 10 States studied, adult programs were observed to be among the most responsive and innovative and were much more dependent than secondary programs on Federal funding. Subpart 5 funds accounted for 5 percent of the combined Federal, State, and local support of secondary programs but for 64 percent of the combined support of adult programs in the 7 of the 10 States for which these data are available.[32] These seven States used 90 percent of their State and local funds for secondary programs and divided the remaining 10 percent between postsecondary (7 percent) and adult (3 percent) programs.

Ancillary Services

According to VEDS information, Federal funds contributed 35 percent to meeting the costs of ancillary services other than State administration in the 10 States studied, excluding unliquidated obligations. In 1978, Subpart 5 funds contributed 34 percent of the cost of research and development and 24 percent of administrative costs, in contrast to only 7 percent of the cost of educational programs.[33] It is questionable, given current fiscal restraints, whether States would continue administrative activities at the same level without Federal money.

Reduced support of administrative costs could affect States' responsiveness adversely because regional and State administrative staffing plays an important role in promoting responsiveness. The State C&HE supervisor has major responsibility for substantive leadership and implementation of Subpart 5. Nine of the 10 States have one or more administrative staff members to assist the State supervisor.[34] Five States have regional staff people who help teachers modify their programs and overcome obstacles to innovation at the local level. In Wisconsin, not one of the 10 States studied, Federal money for an additional State consultant and district person to supervise Federal projects and direct proposals was said to be "crucial for the continued growth in serving more target groups."[35]

An ancillary service which can be an effective means for States to promote responsiveness at the local level is inservice training. It can make teachers aware of the goals of the Act and lend support to their efforts to promote them. This service was either partially or wholly supported by Federal funds in the 10 States.

Programs in Economically Depressed Areas

According to VEDS information, the 10 States spent 64 percent of Subpart 5 funds in fiscal 1979 in support of programs in economically depressed areas.[36] Eight of the 10 spent 50 percent or more in these areas. State and local monies provided 91 percent of program costs there and 95 percent in areas not economically depressed. Thus, the 10 States more than complied with the requirement to spend one-third of Subpart 5 funds in economically depressed areas, as well as with the fund-matching requirement. The Office of Vocational and Adult Education (OVAE) of the U.S. Department of Education, formerly the Bureau of Occupational and Adult Education (BOAE) of the U.S. Office of Education, has instructed States to allocate Subpart 5 funds according to the same formula as the basic grant monies. As a result, most of the 10 States divide Subpart 5 funds into two parts--one-third and two-thirds--and apply the formula to both, thereby assuring that at least one-third goes to programs in economically depressed areas.

Compliance with Subpart 5 and use of the definition of economically depressed areas found in the Public Works and Economic Development Act, however, do not insure that districts with the greatest need receive proportionately larger amounts of Federal funds. Under that broad definition, approximately 85 percent of the Nation's population lives in such areas. C&HE programs specifically designed for people in the most economically depressed areas were found in some States, but the formula and set asides do not in themselves assure allotments of Federal funds proportional to need.

Funding Patterns Promoting Innovation

Three patterns for the use of Federal funds were found in the 10 States studied. The first pattern, used by three States, is to distribute Federal money (sometimes mixed with State money) to all local school districts that meet State program standards, usually on an entitlement basis. The Federal money maintains existing programs which may or may not reflect the specific priorities of Subpart 5. In this pattern Federal funds are not clearly visible and there is little or no assurance that the small amount of Federal money received by a district will promote responsiveness.

In the second pattern, a district is awarded Federal money in response to a proposal which demonstrates that program activities will directly reflect the purposes of the legislation. The money is used to introduce new elements into the system rather than to maintain existing programs. Only 2 of the 10 States distribute all their Federal money in this way; but in 5 others, which represent the third pattern, a portion of Federal money is used to fund innovative programs, while the remainder is used to maintain existing programs. In one State, for example, small grants of Federal funds are given to school districts for programs to serve the special populations mentioned in the law.

Indirect Influence of Federal Funds

C&HE programs which receive no Federal money are under no obligation to be responsive to the goals of the Federal legislation. Nevertheless, there are signs that Federal funds exercise an influence on these programs indirectly, mainly as a result of ancillary services--inservice training, curriculum development, and administration--designed to improve program quality and promote the goals of the Act. Such services are available in many States to all teachers. Inservice training and use of curriculum materials which follow State guidelines, for example, are often not restricted to teachers in "vocationally approved programs"--that is, programs meeting standards established by the State, a common prerequisite for the allotment of Federal and/or State monies.[37] Another indirect influence can be seen in the fact that in some States where C&HE programs not supported by Federal funds are offered to seventh and eighth grade students, program leadership is provided by State supervisors and other administrative staff. Moreover, in small school districts, junior high school programs may be taught by vocationally approved teachers who received inservice training acquainting them with the purposes of the Federal law.

State and Local Factors Affecting Responsiveness

Because the law is permissive and the proportion of Federal funds to State and local funds is relatively small, responsiveness to the Federal legislation varies considerably among States and is affected by State and local factors. Chief among these are: (1) the extent to which C&HE is integrated into a State's larger vocational education administrative structure; (2) the goals of the C&HE network; (3) the visibility of Federal funds at the local level (a factor potentially subject to direct Federal control); and (4) State education laws, policies, and funding practices.

The emphasis on planning and evaluation in Federal vocational education legislation since 1968 has affected the extent to which C&HE is integrated into the vocational education administrative structure of some States. That emphasis, together with other factors, prompted a gradual change in the organization of some State vocational education agencies after the mid-1970's, away from a program structure (e.g., agriculture, trade and industry, home economics) toward a functional structure (e.g., planning, program operations, evaluation), better suited to the Federal requirements for planning and evaluation. For C&HE, an important by-product of this shift has been an increased understanding of and responsibility for C&HE goals and programs by State vocational education administrators who are responsible for activities--such as research or budget--which cut across all vocational programs. This development, in turn, may contribute to the redirection of C&HE programs in line with the priorities of the Act.

In the past, responsibility for the substantive goals of C&HE programs and implementation of the Act rested chiefly with the State C&HE supervisor. However, that responsibility was seldom accompanied by any significant power to change programs or patterns of State and Federal support. Under a functional organization the redirection of C&HE can be facilitated in several ways. For example, a State C&HE supervisor wanting to innovate but lacking the resources may, with the support of other administrators, be able to effect changes. Moreover, administrators with responsibilities cutting across program areas may scrutinize C&HE programs for cost-effectiveness and recommend their reorientation. In the States studied, organization of the State vocational education agency by function appeared to promote responsiveness to Subpart 5 as administrators grew more familiar with the goals of the Act. However, this increased familiarity might not necessarily promote responsiveness where vocational education administrators did not agree with the goals.

The network of C&HE professional personnel in a State also affects responsiveness. If these individuals are united in support of change, they can reinforce Federal priorities through development of curriculum materials and program standards, inservice training, and professional meetings. Conversely, an active network opposed to Federal goals could deter responsiveness. In States where Federal funds at the local level are highly visible and are not mixed with State and local money, programs are more likely to be characterized by Federal priorities, particularly if the receipt of Federal funds is contingent on planning for programs which address these priorities.

Enrollment in C&HE programs and, to some extent, responsiveness are affected by State laws and policies which impose educational requirements and govern the use of Federal and/or State funds. None of the 10 States studied requires students to take a C&HE course. C&HE enrollment in secondary schools in 4 of the 10 States might have been affected by recent State laws requiring consumer education for all high school graduates. However, this requirement does not necessarily promote responsiveness to Subpart 5 or enrollment in C&HE classes, because the subject matter may also be taught in social studies or business classes.

Enrollment in C&HE programs is, of course, affected by State department of education policies. This is the case with adult enrollment in C&HE programs, which is influenced by the way in which the content of adult programs is defined. Some States authorize only programs clearly responsive to Federal intent, ruling out, for example, classes in crafts and leisure activities. In such States, total adult enrollment has decreased. Enrollment in elective classes, including those in C&HE, may decrease as a result of a State's emphasis on minimum educational competencies or basic skills. Decreasing enrollments or fiscal constraints may provide grounds for discontinuing C&HE, like other electives, and this factor has led some States to adopt policies to focus money for C&HE on one educational level to the exclusion of another.

There is evidence that C&HE enrollments are also affected by the level of State expenditures for vocational education. In some States, the share of total expenditures accounted for by State funds is smaller than the local share, while in others State funds account for three-fifths and more of total expenditures.[38] In the 10 States studied, it appears that those with substantial State funding of vocational education were generally able to direct more Federal money into adult programs, thus increasing adult enrollments. Where relatively less State money goes to vocational education, Federal money is sometimes used in a way that results in higher C&HE enrollment and promotes responsiveness. This is the case where Federal funds are used to contract with another agency to run adult programs.

At the local level, autonomy of school districts can limit the influence of the State C&HE leadership in promoting Federal goals, and reduced enrollments and budgets may discourage a propensity for change, if it exists. Change takes time; it is more likely to occur when C&HE is an integral part of the administrative structure for vocational education in the State, when change is supported by the professional network, and, of course, when there is receptivity to the goals of the Act in the local district.

Summary of NIE Findings

What, in sum, has been learned from the NIE study about (1) what is being taught in C&HE programs and to which kinds of students; (2) the influence of the 1976 legislation; and (3) effects on learners, measured by the extent to which participating in C&HE programs affects either the knowledge, attitudes, or behavior of students?

Courses in the six subject matter areas listed in Subpart 5 of the Education Amendments of 1976 are all offered. Courses in food and nutrition and in clothing and textiles had the two highest enrollments in 1978, as they did in 1972. Enrollment in food and nutrition courses rose from second to first place over that period, and consumer education had the lowest enrollment throughout it. However, topics in all six content areas, as well as the four given special emphasis in the 1976 law, are frequently taught in C&HE courses other than those bearing the particular content area label. The courses focusing most on the content areas emphasized in the law are the outreach programs for adults and the "adult living" courses for high school students.

The majority of learners are still found in secondary programs, as they were in 1972, but adult enrollment in C&HE increased 59 percent by 1978. Male enrollment in secondary school courses tripled between 1972 and 1977, an increase attributed by local officials to Title IX of the Civil Rights Act of 1972, but females still constitute 80 percent of all C&HE students. The educationally disadvantaged (defined, in the 10 States studied, as inhabitants of economically depressed areas) and the elderly are the most extensively served of the special populations listed in Subpart 5. Handicapped persons also participate in C&HE programs offered in schools and social service agencies.

The language of Subpart 5 encourages, but does not prescribe, programs in line with Federal priorities. The language is sufficiently broad to permit the maintenance of traditional programs as well as the introduction of new programs which reflect the subjects emphasized in the law. The provision for the one-third set aside for economically depressed areas does not insure that those most in need will be served, even though the States more than comply with this requirement. There is evidence that the use of all or part of Subpart 5 money by a State to fund districts' proposals which reflect the purposes of the law is more likely to promote responsiveness than distributing Federal funds to all districts on an entitlement basis.

The impact of Federal funds is especially manifest in adult programs and ancillary services. Adult programs are more dependent on Federal support than are secondary programs, and outreach programs for adults are among the most responsive to the goals of the legislation--for example, in providing consumer education to the poor. Federal funds play a proportionately larger role in ancillary services than in educational programs. Administrative services at the State and regional levels and inservice training enable States to promote responsiveness on the local level and also appear indirectly to influence local programs which receive no Subpart 5 money to be responsive to Federal priorities.

State and local factors which promote responsiveness are the integration of C&HE into the State's vocational education administrative process, a professional C&HE network that supports Federal priorities, and the visibility of Federal funds at the local level. Enrollment in C&HE programs is influenced by State policies which set educational requirements and govern the use of Federal or State funds.

Relatively little rigorous research has been conducted on the effects of C&HE programs on learners in terms of changes in knowledge, attitudes, or behavior. Some evidence indicates that knowledge improves after students participate in C&HE courses, particularly in the subject matter areas of child development and nutrition. Significant evidence that students' attitudes and behavior are affected is lacking. In short, no conclusive statement can be made about the effectiveness of C&HE programs on the basis of available research findings.

FOOTNOTES

1. National Education Association, "The Vocational Education of Females," in *American Education and Vocationalism: A Documentary History 1870 - 1970*, eds. Marvin Lazerson and W. Norton Grubb (New York: Teachers College Press, 1974), p. 115.

2. Henrietta W. Calvin, "Principles and Policies in Home Economics," Home Economics Circular No. 4 (Washington, D. C.: Bureau of Education, 1918), in Geraldine Clifford, "'Marry, Stitch, Die or Do Worse': Educating Women for Work in the American Republic," in *Work, Youth and Schooling: Historical Perspectives on Vocationalism in American Education*, ed. Harvey Kantor and David Tyack (Stanford University Press, forthcoming).

3. To help answer these questions, the NIE contracted for a study of responsiveness by CRC Education and Human Development, Inc., and, with the aid of two home economists as consultants, reviewed research conducted after 1968 on the effects of C&HE programs on learners' knowledge, attitudes, and behavior.

   The study of responsiveness was conducted in 10 States: the five "core" States (California, Florida, Illinois, New York, and Texas) and five additional States (Georgia, Idaho, Maine, Nebraska, and West Virginia). Researchers visited a total of 100 local programs and interviewed more than 500 State and local education personnel as well as 5 officials at the U.S. Department of Education. Quantitative data on enrollments and expenditures were secured from Federal sources when available.

4. From BOAE data cited in Jenifer Drew, Frances Jones, and Judith Siegel, *Federal Legislation and System Change: The Responsiveness of Consumer and Homemaking Education to the Education Amendments of 1976, Final Report* (Belmont, Massachusetts: CRC Education and Human Development, Inc., 1981), p. 105. (Hereafter cited as The CRC Report.)

5. Marilyn Rossmann and Joanne Parsons, *A Descriptive Study of Consumer and Homemaking Programs in Minnesota, Final Report* (St. Paul: Minnesota Department of Education, 1980).

6. The CRC Report and Ruth Hughes, Barbara Rougvie, and Barbara Woods, *The National Census Study of Secondary Vocational Consumer and Homemaking Programs* (Ames, Iowa: Iowa State University Research Foundation, Inc., 1980).

7. Ibid. The survey data do not indicate either the depth with which a given topic is taught or whether a particular consumer education topic, for example, receives greater coverage in a consumer educa-

tion course than in a comprehensive course. Moreover, these data tell nothing about the extent to which a given subject is taught outside C&HE. Information on course enrollment and duration is also limited. It is not known how much similarly labeled courses in different schools differ in content or how accurately course names suggest the subject matter included.

8. From VEDS data.

9. From BOAE data cited in The CRC Report, p. 98.

10. The CRC Report, pp. 111-113.

11. Ibid., pp. 100-101. Only 3 of the 10 States offered C&HE to enrolled postsecondary students. A 40-percent increase in postsecondary enrollment in this period was accounted for mainly by one State with a large community college system.

12. Ibid., p. ix.

13. Ibid., pp. 127-130.

14. Assistance in identifying and reporting on studies was provided by Dr. Mildred Griggs, Associate Professor of Vocational and Technical Education at the University of Illinois, and Dr. Joan McFadden, Dean of the College of Family Life at Utah State University, who together prepared a commissioned paper on "The Effectiveness of Consumer and Homemaking Education: A Review and Synthesis of Extant Data" (1980).

15. Cheryl Fedje, Ellen Champoux, and Melinda Holcombe, "Impact Research Focusing on Mildly Mentally Handicapped Students in Secondary Vocational Consumer and Homemaking Programs," mimeographed (Norman, Oklahoma, 1981); Roberta Lee Harrison, "Assessment of a Selected Group of High School Girls' Experience in a Child Observation Center" (Master's thesis, Oregon State University, 1970); Jeanne Shirley Miksis, "Assessment of Change in Behavioral Understanding, Marital Role Expectations, Self-Concept, and Ideal Marriage Partner in High School Child Development Students" (Master's thesis, Oregon State University, 1978); Deborah Cade Mumme, "The Development and Use of a Teaching Unit Strategy in the Study of Child Development" (Master's thesis, Texas Technological University, 1974).

16. Reba J. Davis, Teaching Techniques and Resource Material Development for Nutrition Education among Disadvantaged Youth and Adults: Project Summary, Conclusions, and Recommendations for Final Report, Vol. I (Fayetteville, Arkansas: The University of Arkansas, 1974); Hazel Taylor Spitze, "Curriculum Materials and Nutrition

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17. Nancy Gigoux Hutchins, "Assesssment of Changes in Self-Concept, Marital Role Expectations, and Behavioral Understanding in High School Family Life Students" (Master's thesis, Oregon State University, 1970).

18. Jane Hillabolt Lee, "The Effectiveness of a Metric Unit in a Selected Secondary Home Economics Class" (Master's thesis, Oklahoma State University, 1972).

19. M.C. Sand, "Parenthood Education Effectiveness of Iowa Secondary Home Economics" (Master's thesis, Iowa State University, 1980).

20. Alyce Fanslow and Cheryl W. Compton, *Entrepreneurship Education: The Effect of Instruction on Achievement and Attitude* (Ames, Iowa: Iowa State University, Home Economics Education Department, 1981).

21. Jack Stenner and Jerry Matson, *A Comparative Assessment of Secondary Consumer and Homemaking Education Programs, 1974-75: Final Report* (Springfield, Illinois: Illinois Office of Education, 1975).

22. F. L. Cogle, "The Effectiveness of Teaching Consumer Education Concepts as Determined by Test Scores of Secondary Students in Home Economics" (Ph.D. diss., Florida State University, 1977).

23. Helen Y. Nelson and Gertrude P. Jaccoby, *Evaluations of Homemaking and Consumer Education Programs for Low-Income Adults* (Albany, New York: New York State Department of Education, 1973).

24. Diane P. White, "Measurement of Concept Attainment of Students Enrolled in a Pilot Course, Adult Roles and Functions" (Master's thesis, Marshall University, 1979).

25. Harrison, op. cit.; Miksis, op. cit.

26. Hutchins, op. cit.

27. Aleene A. Cross et al., *Evaluation of Vocational Home Economics Programs in Terms of the Effectiveness of Full-Time Homemakers and Homemakers Who Are Also Full-Time Employees* (Washington, D.C.: U.S. Department of Health, Education and Welfare, Office of Education, 1971).

28. Mumme, op. cit.

29. Karen Anne Paulsen, "Recent High School Graduates: Use and Know-

ledge of Selected Clothing and Textiles Concepts and Techniques Taught in Secondary Home Economics" (Master's thesis, Oklahoma State University, 1974).

30. Virginia Lockhart, "A Comparison of Purchasing Habits between Students Who Successfully Complete Consumer Education Courses and Those Who Do Not," mimeographed (1978).

31. From VEDS data. Figures exclude unliquidated obligations. In the 10 States, Subpart 5 funds accounted for 8 percent of the $177 million spent on C&HE in 1979.

32. From BOAE data and 1978 Accountability Reports, cited in The CRC Report, pp. 143-145.

33. From BOAE data and 1978 Accountability Reports cited in The CRC Report, p. 147. These data were available for 6 of the 10 States.

34. In these States half of the supervisor's salary is paid by Subpart 5 funds.

35. Billy Jean Fleming, "Responsiveness Study: Federal Legislation and Consumer and Homemaking Education in Wisconsin VTAE System" (Ph.D. diss., University of Wisconsin, 1980), pp. 130, 146.

36. Unliquidated obligations are excluded.

37. In districts receiving no Federal funds, many teachers are sufficiently interested in benefiting from inservice training that they pay their own way to attend the sessions.

38. The Interim Report, Figure VI-2, p. VI-32.

CHAPTER VII. EFFECTS OF VOCATIONAL EDUCATION ON PARTICIPANTS

Introduction

Three questions are frequently asked about the effects of vocational education. One question asks what difference vocational education makes to learners. For example, does it help them acquire skills, get jobs, or increase their occupational mobility, or does it have still other value for those who might not, in its absence, complete secondary school? By funding vocational education, the Federal Government seeks to change the vocational education enterprise in ways that are ultimately expected to affect students. Funds set aside for the disadvantaged and handicapped, for example, are expected to enhance those students' opportunities for gainful employment. Consequently, a second question asks in what respects Federal policy, acting through the States and localities, affects students. Still a third question asks what the return is to the society on the investment made by Federal, State, and local governments in public vocational education. Does it contribute to the well-being of the society by equipping workers with the occupational skills required for a changing, technologically advanced, and expanding economy? Does it contribute to reducing poverty or youth unemployment, and if so, is it a cost-effective means of doing so?

This chapter addresses the first question, which concerns the difference that participation in vocational education makes to learners. Answering this question is difficult. The effects of participating in a curriculum cannot readily be disentangled from factors that originally led students to select that curriculum. Moreover, factors other than curriculum influence the economic and noneconomic experiences of learners after their years in school. The family background and cognitive ability of learners, the places in which they live, the quality of their schools, and labor market conditions all influence learners' subsequent attainments. Knowledge of the effects of vocational education on participants is further limited by the difficulties of classifying students as vocational, identifying a comparable group of nonvocational students with whom to contrast vocational students, the diversity of programs in different occupational specialty areas, and the lack of information on certain outcomes of the vocational education experience.

These difficulties and limitations should be borne in mind in considering the evidence presented here on the difference vocational education makes to participants. Results from previously conducted studies, which are broad in scope and methodologically relatively sound, are summarized together with findings from reanalyses of national longitudinal survey data. Thus, this chapter builds upon the findings of earlier research presented in Chapter VII of The Interim Report.

The outcomes of participating in vocational education which are examined were identified from the goals that are stated directly or are implicit in Federal vocational education legislation since 1963 or in reports of the special bodies that influenced the legislation of 1963 and 1968.[1] The legislation indicates ways in which vocational education is intended to benefit the individuals who participate in it. Two intended outcomes, for example, are given in the evaluation provisions of the Education Amendments of 1976: employment in occupations related to students' training for entry-level jobs, and employers' opinions on whether students are well trained and prepared for employment.[2] Other intended outcomes include gainful (paid) employment above the unskilled level; attainment of academic credentials for postsecondary enrollment; occupational knowledge and skills; basic skills in reading, writing, and computation;[3] ability to cope with change in jobs; long-term occupational advancement; years of schooling attained; employability skills; and leadership.

Some of these outcomes cannot be studied with available data. However, for those that have been investigated, findings of prior research and results of reanalyses of longitudinal data are presented. The research on outcomes associated with participation in secondary vocational education programs reviewed here deals with:

1) gainful employment, as indicated by employment status, hours and weeks worked, wages and earnings, occupational status, relatedness of job to training, self-employment, and job satisfaction;
2) occupational knowledge and skills;
3) occupational advancement;
4) years of secondary school attained;
5) citizenship; and
6) credentials for postsecondary enrollment.

In addition, evidence pertaining to outcomes of participation in postsecondary vocational education programs is examined.

Before the research findings are reviewed, a word of warning is in order. Because of the difficulties inherent in identifying a particular outcome as a function of participation in a vocational education program and because of the character of the longitudinal survey data available, few conclusive statements can be made about the differential effects of participating in vocational education programs. Furthermore, there are difficulties associated with classifying secondary students in vocational education and general curricula. For example, in about 3 out of 10 cases, students classify themselves differently from the way school officials classify them. In the reanalyses reported here, students' reports of their curriculum and occupational specialty were used to examine outcomes. In this regard, it is important to note that information on vocational coursework obtained from students' transcripts yielded findings on outcomes similar to those obtained with students' self-reports.

Outcomes Associated with Participation in Secondary Vocational Education Programs

Gainful Employment

Since the time of the earliest vocational education legislation--the Smith-Hughes Act of 1917--the major purpose of vocational education has been to prepare individuals for gainful employment as semiskilled or skilled workers in occupations not requiring a baccalaureate degree. Several outcomes have been studied to indicate the effects of vocational education in connection with this purpose, including employment status, hours worked, wages, earnings, occupational status, relatedness of job to training, self-employment, and job satisfaction.

In the reanalyses of national longitudinal surveys, these outcomes were examined for students with exactly 12 years of schooling. Outcomes were examined at three different times for the cohort of the National Longitudinal Study of the High School Class of 1972 (NLS-1972)--at entry into the labor market and 1 and 4 years after graduation (1972 to 1976); at three time points for the male cohort of the National Longitudinal Survey of Labor Market Experience--at entry and 4 and 10 years after graduation (1966 to 1976); and at one time (1979--the only time point available) for the cohort of the National Longitudinal Survey of Young Americans, aged 18 to 21.[4]

White and black male graduates of business and office and trade and industry programs, and white and black female graduates of business and office programs, were separately compared with general curriculum graduates of the same sex and race. Data were not available in the surveys with which to examine the different subspecialties within trade and industry. Nor were sample sizes large enough to consider separately male graduates of agriculture, distributive education, or home economics programs, or female graduates of agriculture, health, distributive education, or trade and industry programs. For each sex, graduates of these specialties were combined in the reanalyses.

Students' high school curriculum and occupational specialty, if available, were identified by the students' reports. For the one data set (NLS-1972) in which transcript data on students' coursework were available, the transcript information was used to examine gainful employment outcomes in two ways--in conjunction with students' reported curriculum, and alone. When used in conjunction with students' reported curriculum, vocational coursework explained very little variation in gainful employment outcomes beyond that explained by students' reports of their curriculum. When used alone (that is, without students' reported curriculum), the transcript information yielded results that were in some ways similar to those obtained with students' reported curriculum, but, in general, differences in outcomes associated with vocational coursework tended to be both fewer in number and smaller in magnitude than those associated with students' reported curriculum. Clearly, these findings raise questions about the relationship between coursework data obtained from transcripts and students' reports of their secondary curriculum. These questions cannot be addressed in this chapter, and it should be noted that results of reanalyses reported here are based almost exclusively on students' reports of their curriculum--the only means of curriculum identification available in two of the three data sets used in the reanalyses.

There was no evidence that vocational and general curriculum students within any of the four sex-race groups differed markedly in socioeconomic status or on measures of scholastic aptitude or basic skills; however, it must be kept in mind that differences in all of the students' characteristics or factors influencing their selection of a curriculum cannot be controlled in examinations of curricular effects.

Employment status. Labor force participation and unemployment rates of male graduates of vocational programs do not consistently differ from those of general curriculum graduates in the national data sets used in reanalyses. Labor force participation rates[5] of white and black male graduates of both curricula are above 80 percent in the 10 years following graduation (1966-1979).

Unemployment rates of white male graduates are generally under 10 percent, with curricular differences small and inconsistent. Unemployment rates of black male vocational graduates are somewhat higher (generally under 14 percent), and do not consistently differ from those of black male general curriculum graduates.[6]

Female students in business and office programs comprise the majority of females enrolled in occupationally specific vocational education programs. In the first 4 years after graduation, white female graduates of secondary business programs have slightly but consistently higher (2 to 11 percent) labor force participation rates than white female graduates of the general curriculum in the reanalyzed national samples.[7] Upon entry into the labor market, the labor force participation rate of these business graduates is high (above 83 percent) and decreases by about 20 percentage points by the fourth year after graduation. The labor force participation rate of black female business graduates does not consistently differ from that of black female graduates of the general curriculum.

In prior research, unemployment rates of females in business and office programs have been obtained with only one national survey, which indicated that white and black females who had enrolled in or completed a commercial program in secondary school experienced far less unemployment within 10 years after high school than general curriculum participants.[8] Reanalyses conducted with two more recent national samples indicate that unemployment rates of white female graduates of general, business, and all other vocational programs combined (except home economics) do not consistently differ within the first 4 years after graduation.[9] These findings were also obtained with black females.

Hours and weeks worked. Employed male graduates of vocational and general programs generally work a 40-hour week regardless of how long they have been out of school.[10] In the year after job entry, white male graduates of trade and industry programs--the occupational specialty with the largest male enrollment--work 1 to 3 more weeks per year than white male graduates of the general curriculum.[11] Black male vocational graduates and white male graduates of business programs do not significantly differ from general curriculum graduates in the number of weeks they work per year. Nor do white or black male graduates of the general curriculum differ from graduates of vocational programs with respect to the number of hours they work per week or the number who are employed full time.

Employed female high school graduates work a somewhat shorter week (34 to 38 hours) on the average than male graduates.[12] White female graduates of business programs are more likely than general curriculum graduates to be employed full time (as opposed to part-time) in the 4 years after graduation, though the difference between these groups decreases between job entry and the fourth year after graduation.[13] White female business graduates work approximately 2 more hours per week and 3 more weeks per year than general curriculum graduates 1 year after graduation, but significant differences are not apparent 4 years after graduation.[14]

Black female graduates of business programs work 4 more hours per week and 5 more weeks per year 1 year after job entry than black female general curriculum graduates.[15] Four years after graduation, these business graduates work approximately the same number of hours per week but 8 more weeks per year in comparison to black female graduates of the general curriculum. There is no difference in the rate of full time employment between black female graduates of business programs and of the general curriculum in the 4 years after graduation.

Hourly wages and weekly earnings. Findings regarding wages and earnings differ for males and females. For males, prior research indicated that differences in hourly wages and weekly earnings of vocational and general curriculum graduates are small, with average wages and earnings of vocational graduates usually slightly higher.[16] Reanalyses, in which national survey samples were disaggregated by race, sex, and occupational specialty, do not reveal consistent differences between the weekly earnings of male graduates of the general and vocational curricula.[17] Average weekly earnings of both white and black male graduates were found to increase with increasing years out of school. Earnings of black males are consistently lower than those of white males, and earnings of females are lower than males'.

Female vocational graduates, including some who had had postsecondary education, were found in some prior research to have slightly higher weekly earnings than general curriculum graduates at job entry and 1 year after graduation,[18] but not 4 years after graduation.[19] More recent studies of female graduates with exactly 12 years of schooling indicate that vocational education is positively associated with higher weekly earnings for females 4 years after graduation,[20] particularly for white female graduates of business programs.[21] These findings are in agreement with results obtained by Grasso and Shea for annual earnings and hourly wages.[22]

White and black female graduates of business programs were shown in reanalyses to have higher weekly earnings (by $10 to $20) than female graduates of the general curriculum at job entry, 1 year after graduation, and 4 years after graduation.[23] During this 4-year period, white and black female students of all other vocational programs combined (except home economics) had somewhat lower weekly earnings than female business or general curriculum graduates.

Differences in hourly wages between female general and vocational graduates (usually not disaggregated by enrollment in postsecondary programs or by occupational specialty) have not been consistent in prior research; in some instances vocational students were found to have higher wages than general curriculum students, while in others the opposite was true.[24]

Occupational status. Prior research indicated that, within 4 years after entry into the labor market, a greater percentage of male graduates of secondary vocational education programs than of the general curriculum were employed in semiskilled (operative) or skilled (craft) occupations, while a greater percentage of male graduates of general than of vocational programs were employed as unskilled workers (laborers or unskilled service workers).[25] These results were obtained with students in the NLS-1972 sample, some of whom had had postsecondary education.

Reanalyses with samples of students who had exactly 12 years of schooling indicate that similar proportions of male vocational and general curriculum graduates are employed in any of three occupational categories (skilled, semiskilled, or unskilled).[26] Furthermore, at entry and 1 and 4 years after graduation, white and black male graduates of the general curriculum are employed in jobs with occupational status similar to that of graduates of business and trade and industry programs.[27] The only exception to this pattern is that 1 year after graduation white male graduates of business programs were found to hold jobs with slightly higher occupational status than those of white male graduates of the general curriculum.

Much more striking differences in occupational status were found between female general curriculum graduates and female graduates of business programs. In the first 4 years after graduation, white and black female graduates of business programs are far more likely to be employed in skilled clerical jobs than are general curriculum graduates,[28] and more female graduates of the general curriculum than of business programs hold unskilled service jobs. In addition, white and black female business graduates were found to have jobs with somewhat higher occupational status than those of general curriculum graduates, although this difference tends to decrease by 4 years after graduation.[29] Female graduates of vocational programs other than business or home economics tend to have jobs with slightly higher occupational status than general curriculum graduates 1 and 4 years after graduation, but this difference is not as marked as that between female business and general curriculum graduates.

Relatedness of job to training. Employment in jobs related to training, as has been said, is one of two criteria specified in the Education Amendments of 1976 for evaluating effectiveness of vocational programs.[30] Reports of job-relatedness based on judgments made by teachers or former vocational students themselves show results different from those found in research using more objective job classification measures.[31] Findings reported here were obtained with systematic job classification procedures.

Results of reanalyses using the Education Occupational Cross-Code Index indicate that employment in jobs related to training varies considerably from one occupational field to another, with the highest proportions of job-to-training matches in trade and industry programs for males (especially white males) and in business programs for females.[32]

One year after graduation, 53 percent of white and 43 percent of black male graduates of trade and industry programs are employed in jobs systematically classified as related to their training. Corresponding percentages for female graduates of business programs are 58 and 51 percent for white and black females, respectively.[33]

Self-employment. In recent years entrepreneurship has been cited as a positive outcome of participation in vocational education; however, the percentage of graduates of vocational and general programs who are self-employed in the early years after graduation is understandably small. In one previous study, graduates of agriculture programs were found to be self-employed in sizable proportions (21.8 percent in comparison to 7.2 percent of general curriculum graduates).[34] Reanalyses do not yield clear evidence that graduates of trade and industry, business, or other vocational programs combined are self-employed more often than general curriculum graduates.[35] Reanalyses of the data regarding the earlier finding of self-employment of graduates of agriculture programs could not be conducted because the samples were too small.

Job satisfaction. Prior research based on self-reports has consistently indicated that high proportions of vocational education graduates express satisfaction with their jobs.[36] Reanalyses also indicate that high proportions (69 to 96 percent)[37] of vocational graduates questioned in national surveys express satisfaction with their jobs. Percentages of former general curriculum graduates in these samples who say they are satisfied with their jobs are similar.

Occupational Knowledge and Skills

Attainment of occupational skills by vocational education students has not been examined with objective measures in national studies, but there is some information on the occupational knowledge they acquire.

Grasso and Shea reported that male and female students in business and office programs had equivalent or greater knowledge of duties performed in several occupations than students in the general curriculum, but male and female students in all other vocational programs combined had less familiarity than general curriculum students with most of these occupations.[38] Male vocational students demonstrated far less knowledge than male students in the general curriculum of occupations that require a college education. These results, obtained in the late 1960s, did not differentiate between white and black students. Reanalyses conducted with a more recent (1979) sample indicate that, in general, vocational students' knowledge of occupations is slightly better than that of students in the general curriculum; however, race is associated with differences in occupational knowledge to a greater extent than is curriculum. That is to say, more whites than blacks in both the general and vocational curricula correctly identify duties performed in most occupations. These findings were obtained with males as well as females.[39]

Occupational Advancement

Secondary vocational education is also presumed to lay a foundation for later occupational advancement. Prior research on occupational advancement of vocational education graduates with no postsecondary education has been conducted with only one national survey. Change in graduates' occupational status from 1966 to 1973 was examined for males who had graduated from high school general, commercial, and other vocational programs in 1966. Results revealed that white and black graduates of the general curriculum, particularly white male graduates, experienced somewhat greater advancement than graduates of commercial or other vocational programs.[40]

Reanalyses with a later national survey indicate that male and female graduates of general and vocational programs experience similar rates of occupational advancement within the first 4 years after high school (1972 to 1976).[41] In general, males tend to advance more rapidly after the first year after graduation, whereas females, particularly black females, advance most rapidly during the first year after graduation.

Similar percentages of vocational and general curriculum graduates participate in on-the-job training or apprenticeship programs during the first 4 years after high school.[42] More males participate in these programs than females, possibly, in part, because training programs are more likely to be offered in industrial than in office settings where many females are employed. More whites than blacks participate in on-the-job training programs.

Years of Secondary School Attained

Secondary vocational education programs have long been viewed by some as a means of holding in school students who would drop out if the programs were not available.[43] Research on dropout rates of students in different curricula in the 1960's indicated that the dropout rate of male and female students in business programs was lower than that of students in the general curriculum.[44] However, the studies which compared dropout rates of students in other vocational programs with those of general curriculum students did not yield consistent results.[45]

Reanalyses conducted with a recent (1979) national sample provide tentative support for the proposition that fewer vocational than general students drop out of public secondary school.[46] Findings for blacks and whites, males as well as females, seem to be generally consistent with this proposition.[47] However, definitive conclusions about dropout rates of students in different curricula cannot be reached until longitudinal data, which indicate patterns of transfer among high school programs, become available.

Citizenship

Just as vocational education has been seen as a means of holding students in school, it is also sometimes viewed as an opportunity for schools to provide education in citizenship to those students who remain in school.[48] The notion of citizenship is difficult to define in operational terms. Voting has been taken as one indicator of citizenship in prior research. Follow-up studies of 1972 high school graduates 2 and 4 years after graduation indicated that the difference in voting between white and black students is much larger than the difference in voting between vocational and general curriculum students. Approximately equivalent percentages of male and female graduates of the general and the vocational curricula said they were registered to vote or had voted.[49] Another previous study also found no difference in voting between vocational and nonvocational graduates.[50] Reanalyses conducted with national samples of graduates with exactly 12 years of schooling confirm these findings: similar percentages of vocational and general curriculum graduates report having voted or registered within the first 4 years after graduation (1972 to 1976). This result was obtained with black and white males and females.[51] Because it is limited to voting, research on citizenship to date does not provide evidence to support or refute the view that vocational education provides an opportunity for schools to furnish education in citizenship to the students it may be keeping in school.

Credentials for Postsecondary Enrollment and Patterns of Enrollment

In the Education Amendments of 1968, the definition of vocational education included programs designed to prepare students for enrollment in advanced technical education programs. The Education Amendments of 1976 broadened that definition to include programs to prepare for a career requiring other than a baccalaureate or advanced degree. The concern in the Act was that the opportunity for vocational students to continue their training for advanced technical or subprofessional occupations should not be limited by their having graduated from a vocational program in high school.

A survey of postsecondary institutions offering programs below the baccalaureate degree indicated that the only credential required for admission to the great majority of these schools is a high school diploma. Thus, graduates of any high school program, vocational or nonvocational, have the necessary credentials for enrollment.[52] Few postsecondary schools indicated that they require previous academic coursework for admission, although some recommend it, and none requires prior vocational coursework for general admission.[53]

To what extent do graduates of secondary vocational education programs enroll in nonbaccalaureate postsecondary programs? Excluding those 1972 graduates of secondary vocational education programs in public schools who did not graduate from a 4-year college by 1976 and those who were not attending school full time in the fall of either 1974 or 1975, 45 percent had pursued nonbaccalaureate postsecondary education by 1976. The same percentage of public school general curriculum graduates had done so.[54] The majority of graduates of both curricula who enrolled attended full time in the first or second year after high school. These findings were consistent for male and female blacks and whites.

What kinds of postsecondary programs did these students pursue? Although data bearing on this question are sparse, among 1972 public high school graduates a higher percentage of vocational than general curriculum graduates reported that they took a vocational postsecondary program (21 and 17 percent, respectively, of all graduates, including those with no postsecondary education), while a higher percentage of general than vocational graduates took an academic program (14 and 7 percent, respectively). Moreover, general curriculum graduates (other than black females) were somewhat more likely than vocational graduates to take their academic studies in a 4-year college. Black male graduates of both curricula who enrolled in postsecondary vocational programs were slightly more apt to attend vocational-technical institutes than 2- or 4-year colleges.

In the NLS-1972 sample, black and white males in postsecondary vocational programs tended to specialize in mechanical and engineering technology programs (including automotive mechanics, machine operations, drafting, construction, and electronics), while females specialized in office and clerical occupations, and, to a lesser extent, health services.

Approximately half the graduates of secondary vocational programs who enrolled in postsecondary vocational programs reported that they earned a certificate, license, or 2-year degree within 4 years of high school graduation, and most had earned them within 2 years. (It is not known what proportion of the sample obtained each of these credentials.) A similar percentage of general curriculum graduates in postsecondary vocational programs reported having earned a certificate, license, or 2-year degree.

Outcomes Associated with Participation in Postsecondary Vocational Programs

The difficulties of determining the effects of students' participation in a high school curriculum, and the vocational education curriculum in particular, have previously been pointed out. In addition to these and the methodological concerns which pertain to any longitudinal study, such as adequacy of response rates and availability of data on outcomes obtained in follow-up surveys, the investigation of outcomes associated with participation in postsecondary vocational programs is fraught with problems. First, it is especially difficult to separate a student's characteristics and the factors that led to the decision to pursue postsecondary schooling from the effects of that schooling on subsequent attainments. Second, the differences between vocational and nonvocational programs at the postsecondary level are not nearly so clear as at the secondary level. The aim of a secondary vocational curriculum clearly differs from that of an academic curriculum. The former attempts to prepare students to enter employment after high school without the necessity of further formal education, while academic programs provide students with courses required for entrance into 4-year colleges. At the postsecondary level, graduates of vocational programs are presumed to be ready to enter employment with no further formal preparation, as are graduates of many academic programs.

A third problem in determining the difference postsecondary vocational education makes to participants is the difficulty of identifying occupational specialties. Students in different occupational specialties in secondary school were found to differ on outcomes pertaining to gainful employment. At the postsecondary level, the problems in identifying occupational specialties "go beyond such familiar problems as missing data, and unreliability of self-reports, to the actual categories used to describe postsecondary vocational specialization and indeed the very meaning of postsecondary 'vocational education'."[55] Still another problem in research on postsecondary outcomes concerns the meaning of a student's not completing a program. As Breneman and Nelson have asked, "Does dropping out represent success or failure? It could reflect success if the student learned as much as he intended and left because he found a job for which he was being trained, or failure if he concluded the instruction would not help him in the labor market."[56]

Notwithstanding the difficulties inherent in this research, it is reasonable to ask what difference postsecondary vocational education programs make to participants' subsequent gainful employment. To answer this question, reanalyses of national longitudinal survey data were conducted which examined the employment status, hours worked, weekly earnings, and occupational status of students who had graduated from vocational and general programs in public high schools and enrolled in postsecondary programs below the baccalaureate level.

The reanalyses were conducted with the NLS-1972 sample, which provides relatively detailed information on the postsecondary educational experiences of a national sample of students. Postsecondary students in the reanalyzed sample could have been in the labor market up to 2 years when outcome data were collected in 1976.[57] The sample was not limited to junior and community college students; it included those who attended one of the following kinds of postsecondary institutions: vocational, trade, business or other career training school; junior or community (2-year) college; or 4-year college or university. Enrollment in a postsecondary institution, as well as the type of postsecondary program, if applicable, were ascertained from students' reports. Since a large number of students did not indicate the type of postsecondary program in which they had enrolled, the possibility of bias in the sample which remains must be kept in mind. Data on postsecondary vocational programs were not disaggregated by occupational specialty because of the small sizes of samples (due in part to the fact that large numbers of postsecondary students did not report their specialties).

Reanalyses indicate that postsecondary schooling below the baccalaureate level confers an advantage on high school graduates on a variety of measures of gainful employment. Postsecondary education is associated with several advantages for white female high school graduates. Those who take a postsecondary program (and, to a lesser extent, those without postsecondary schooling who take a vocational program in high school) have a higher labor force participation rate (by 10 to 20 points), 2 to 7 fewer weeks per year of unemployment, and jobs with higher occupational status than white female graduates of the general curriculum with no postsecondary schooling.[58] For black females, postsecondary education is associated with higher occupational status. In addition, black males and females with postsecondary schooling have slightly lower unemployment rates than general curriculum graduates without postsecondary schooling. Nonbaccalaureate postsecondary education is not associated with different numbers of hours worked per week or weekly earnings of the white or black males or females in this sample, in comparison to those with no postsecondary education.

While high school vocational graduates with no postsecondary schooling do relatively better in certain aspects of gainful employment than general curriculum graduates, advantages are more common for all groups who have some postsecondary education. Evidence obtained with this one national sample, however, indicates that the type of postsecondary program (academic or vocational) has little effect on employment outcomes. There are few notable differences associated with the type of postsecondary curriculum, vocational or academic, and there is no consistent pattern of differences in labor force participation rates, unemployment rates, number of hours worked per week, weekly earnings, or rates of full time employment. Consequently, there is no basis for concluding that one type of postsecondary schooling is associated with greater advantages in gainful employment than another for males or females, black or white.

It should be emphasized that the evidence presented here on outcomes associated with participation in postsecondary programs is much more limited than that pertaining to secondary programs. Reanalyses with postsecondary students were conducted with only one national sample, and it was not possible to examine occupational specialties separately. In addition, students in this sample had been in the labor market only 2 years after completing a postsecondary program.

Summary of Research Findings on Outcomes

What, in sum, has been learned about the outcomes of participation in a secondary vocational program? Evidence from prior research and reanalyses of national survey data indicate fairly consistently that females who graduate from business and office programs--the majority of females in occupationally specific secondary vocational education programs--fare better in the labor market than female graduates of the general curriculum. Specifically, during the 4 years after graduation, white female business graduates with no postsecondary education are more likely than white female graduates of the general curriculum to be in the labor force, hold clerical jobs, work full time, earn $10 to $20 more per week, and have jobs with somewhat higher occupational status. Black female graduates of secondary business programs are more likely to be employed in clerical jobs, earn $15 to $18 more per week, and have jobs with somewhat higher occupational status than black female graduates of the general curriculum. No consistent differences were found between female graduates of business programs and of the general curriculum in their rate of occupational advancement or satisfaction with their jobs.

Evidence of differences between male graduates of secondary vocational and general programs without postsecondary education is not as strong as that for female graduates. One year after graduation, 53 percent of white and 43 percent of black male graduates of trade and industry programs--the occupational specialty with the largest male enrollment--are employed in jobs related to their training. White male graduates of trade and industry programs are employed a few weeks more in the first year of work than white male general curriculum graduates, and white male graduates of business programs have jobs with slightly higher occupational status 1 year after graduation than white male graduates of the general curriculum; however, these differences are not as marked 4 years after graduation. Differences between male graduates of the general and vocational curricula without postsecondary education with respect to their labor force participation rate, unemployment rate, number of hours worked per week, full time employment, likelihood of obtaining employment in skilled jobs, weekly earnings, and job satisfaction tend to be small and inconsistent.

Two points should be borne in mind in considering the evidence presented here on outcomes of participation in secondary vocational education programs. First, differences in outcomes between whites and blacks, and between males and females, are often considerably larger than curricular differences. Second, students' reports of their curriculum and occupational specialty were used to examine outcomes in the reanalyses of longitudinal surveys. In this regard, it is important to note that information on vocational coursework obtained from NLS-1972 students' transcripts explained very little variation in gainful employment outcomes beyond that explained by students' reports of their curriculum. Differences in outcomes associated with vocational coursework alone tended to be both fewer in number and smaller in magnitude than those associated with students' reports of their curriculum.

Evidence from reanalyses conducted with postsecondary students is limited to one national survey. Forty-five percent of the secondary vocational education graduates in this sample pursued nonbaccalaureate postsecondary education within 4 years after graduation, as did a similar percentage of general curriculum graduates. The secondary vocational education graduate was more likely to pursue a vocational than an academic program in postsecondary school, while the opposite is true of the general curriculum graduate. Of the secondary vocational and general curriculum graduates who took postsecondary vocational programs, approximately half the graduates of each curriculum reported that they obtained either a certificate, license, or 2-year degree within 4 years of high school graduation.

Postsecondary education below the baccalaureate level confers an advantage on high school graduates on a variety of measures of gainful employment. Overall, for the one national sample studied, differences in gainful employment outcomes between students in vocational and academic postsecondary programs are slight. They are not substantial enough to warrant the conclusion that the advantage of postsecondary education is any greater for students who take a vocational program than for those who take a nonbaccalaureate academic program.

For white females, postsecondary education is associated with relatively high labor force participation rates, few weeks of unemployment and high occupational status, and for black females, it is associated with high occupational status. Black males and females who take some form of postsecondary education have slightly lower unemployment rates than black general curriculum graduates with no postsecondary education. Postsecondary education below the baccalaureate level is not associated with the number of hours worked per week or weekly earnings of black or white males or females, relative to those with no postsecondary education.

A Final Note

Of the three frequently asked questions about the effects of vocational education, only one--that concerning the difference vocational education makes to participants--has been addressed in this chapter. It should be emphasized that the research results reported do not constitute, and should not be read as, an assessment of the effectiveness of either secondary or postsecondary vocational education programs. They are too limited--by both the data available for research and the difficulty of the research problem--to attribute outcomes, both economic and noneconomic, to particular educational experiences.

Questions about the effects of Federal policy on students and the return to society on the investment cannot be answered with currently available national survey data on students. In order to determine whether students' attainments have changed as a result of Federal policy, a systematic study of State and local policy over time is required, as well as an investigation that traces how Federal legislation has influenced the key factors of the vocational education enterprise over time. Questions pertaining to return on the investment in vocational education require data on costs. Cost-effectiveness might then be determined according to specified criteria. Some might infer that the investment is warranted from evidence of positive effects of vocational education on participants, but such evidence would not by itself serve to indicate to what extent an increase or decrease in the investment would enhance or diminish the benefit of the program to students, nor would it show which features of vocational programs were responsible for their positive effects. Clearly, before these two important questions can be answered, additional research is needed with data collected specifically for that purpose.

Also inviting inquiry are claims frequently made about the benefits which vocational education is assumed to provide. One often-heard claim, for example, is that vocational education is an effective means of reducing youth unemployment in the aggregate. This view rests on the assumptions that youth unemployment results from a mismatch between skills and jobs, and that jobs are available for youth who acquire skills that vocational education can provide. Another claim is that vocational education has value for students not only because of benefits resulting from participation in the curriculum but also because of potential benefits of schooling, such as socialization and assimilation into the dominant culture, which are broader than the purposes of vocational education. This claim was asserted in support of the initial effort to justify Federal investment in vocational education. It rests upon the assumption that students who would otherwise leave school would remain in school to participate in vocational education, thereby deriving the presumed larger benefits of schooling. Evidence available at this time does not provide firm knowledge about either the strength of these several claims or the soundness of the assumptions on which they rest.

FOOTNOTES

1. See E. Woods and W. Haney, "The Effects of Vocational Education: Proposed Propositions and Framework for Study" (Cambridge, Massachusetts: The Huron Institute, 1979); and K. Dougherty, "The Politics of Federal Vocational Education Legislation: 1963-1976" (Cambridge, Massachusetts: The Huron Institute, 1979).

2. These outcome measures, and others specified in the regulations, are discussed in detail in Chapter IV.

3. For information on this subject see Louise Corman, Basic Skills Proficiencies of Secondary Vocational Education Students (Washington, D.C.: Government Printing Office, 1980).

4. Each of these national surveys offers a unique advantage in terms of recency, length of time students are in the labor market, or details of students' coursework. Separate analyses were performed for white males, black males, white females, and black females. For males, general curriculum graduates were compared separately with graduates of trade and industry, business and office, and other vocational programs combined; for females, general curriculum graduates were compared with graduates of business and office and other vocational programs combined (with the exception of home economics). Trade and industry and business programs account for the majority of male and female enrollment in occupationally specific programs, respectively. Only participants with exactly 12 years of schooling (i.e., no postsecondary education) were included in reanalyses of outcomes for secondary students, and this fact may account for certain discrepancies between findings from reanalyses and those of prior studies.

   Within any of the four sex-race groups, only slight differences in socioeconomic status and test scores were found among high school graduates of the general and vocational curricula who had exactly 12 years of schooling. This finding lent support to use of the general curriculum as a comparison group in reanalyses. (The only exception to this pattern was the higher socioeconomic status of black males and females in business programs relative to those in the general curriculum.)

   For each of the four sex-race groups, in addition to descriptive statistics, multiple regression analyses were performed. Socioeconomic status, job training and experience, and, in some instances, school and community characteristics were included as independent variables in regressions in order to identify the extent to which these variables change the power of curriculum to explain outcomes.

This research was conducted through contract with the Huron Institute. Documentation of procedures used in reanalyses of national data sets is provided in E. Woods and W. Haney, Does Vocational Education Make a Difference? A Review of Previous Research and Reanalyses of National Longitudinal Data Sets (Cambridge, Massachusetts: The Huron Institute, 1981). This reference will hereafter be cited as The Huron Report.

In reports of prior research presented here, greater attention is generally given to national than to non-national studies, because the national studies are broader in scope and tend to provide greater specificity regarding characteristics of vocational and nonvocational students. This degree of specificity facilitates comparisons of results across studies. For a review of non-national studies, see D. Mertens, D. McElwain, G. Garcia, and M. Whitmore, Effects of Vocational Education on Participants: A Review of Time or Area Specific Studies Reported Since 1968 (Columbus, Ohio: The National Center for Research on Vocational Education, 1980.)

5. Current Population Survey procedures were used to derive labor force classifications.

6. The Huron Report, Section 4.1. Unemployment rates obtained in reanalyses are sometimes lower than those of the same age group in the general population because samples used in reanalyses include only high school graduates.

   Using the National Longitudinal Survey of Labor Market Experience, Grasso and Shea reported slight differences in unemployment rates between male graduates of the vocational and general curricula within 13 years after graduation. (See J. T. Grasso and J. R. Shea, Vocational Education and Training: Impact on Youth (Berkeley: The Carnegie Council on Policy Studies in Higher Education, 1979), p. 193.) Larger curricular differences in unemployment rates were reported by M. Borus et al., Pathways to the Future: A Longitudinal Study of Young Americans. Preliminary Report: Youth and the Labor Market - 1979 (Columbus: The Ohio State University, Center for Human Resource Research, 1980), Chapter 15. Rates in that study, however, were obtained with aggregate samples of vocational students in the National Longitudinal Survey of Young Americans, some of whom had had postsecondary schooling, and without regard to occupational specialty.

   Although limited data were available with which to examine curricular differences in number and length of spells of unemployment, reanalyses of these outcomes generally yielded no clearly interpretable results.

7. The Huron Report, Section 4.1.

8. Grasso and Shea, op. cit., p. 193; J. R. Shea et al., *Years for Decision*, Vol. 1 (Washington, D.C.: Government Printing Office, 1971), p. 105. Unemployment rates were reported for the sample in the National Longitudinal Survey of Labor Market Experience for the years 1968 to 1972.

9. The Huron Report, Section 4.1. These results were obtained with females in the National Longitudinal Survey of Young Americans and the NLS-1972.

10. Borus et al., op. cit. These results were also obtained in reanalyses.

11. The Huron Report, Section 4.2.

12. These results were obtained in reanalyses. Borus et al., op. cit. reported that females aged 18 to 21 work an average of 36 hours a week.

13. The Huron Report, Section 4.2.

14. Ibid. Socioeconomic status was controlled, using a composite measure of socioeconomic status which was based on father's education, mother's education, parents' income, father's occupation, and certain household characteristics.

15. Ibid.

16. Borus et al., op. cit.; F. R. Creech et al., *Comparative Analysis of Postsecondary Occupational and Educational Outcomes for the High School Class of 1972. Final Report* (Princeton: Educational Testing Service, 1977); A. Harnischfeger and D. Wiley, "High School Tracking and Vocational Stereotyping: Means of Socioeconomic Placement," paper prepared for the National Commission for Employment Policy, April 1980; A. I. Kohen and H. S. Parnes, *Career Threshholds: A Longitudinal Study of the Educational and Labor Market Experiences of Male Youth*, vol. 3 (Columbus: The Ohio State University, Center for Human Resource Research, 1970); N. Lewin-Epstein, "Vocational Education," in *High School and Beyond: Policy Issues and Research Design*, ed. J. Coleman et al. (Chicago: National Opinion Research Center, 1979); D. E. Wiley and A. Harnischfeger, "High School Learning, Vocational Tracking and What Then?" (Chicago: CEMREL, February 1980).

17. The Huron Report, Section 4.3. These findings were obtained with white and black males. In some reanalyses, black male graduates of trade and industry programs were found to earn more per week than black male general curriculum graduates 1 year but not 4

years after graduation; however, these results were not consistently obtained. Earnings were adjusted to constant 1978 dollars.

Reanalyses were not performed with hourly wages because they would have had to be derived from other data. Wage estimates obtained in this manner were considered less reliable for reanalyses than directly reported weekly earnings. Grasso and Shea, op. cit., pp. 85-86, reported no significant differences in hourly wages of male vocational and general curriculum graduates.

18. Creech et al., op. cit.

19. Wiley and Harnischfeger, op. cit. This finding was obtained with white females in the NLS-1972 sample.

20. R. H. Meyer, "An Economic Analysis of High School Vocational Education: The Labor Market Effects of Vocational Education," mimeographed (paper prepared for the National Commission for Employment Policy, June 1981). Level of participation in vocational education was defined on the basis of the number of vocational courses listed on transcripts of students in the NLS-1972 sample.

21. A. Gustman and T. Steinmeier, "The Relation between Vocational Training in High School and Economic Outcomes," mimeographed, July 1981. This finding was obtained with two national surveys--the NLS-1972 and the National Longitudinal Survey of Labor Market Experience.

22. Grasso and Shea, op. cit., Chapter 4.

23. The Huron Report, Section 4.3. This advantage of female business graduates relative to general curriculum graduates remains when socioeconomic status and number of hours worked per week are controlled. Black female business graduates earn $15 to $18 more per week than general curriculum graduates when socioeconomic status and number of hours worked per week are controlled.

24. Borus et al., op. cit.; Gustman and Steinmeier, op. cit.; Harnischfeger and Wiley, op. cit.; Lewin-Epstein, op. cit.; R. D. Roderick and J. M. Davis, Years for Decision, Vol. 2, Manpower Research Monograph No. 24 (Washington, D.C.: Government Printing Office, 1974); Wiley and Harnischfeger, op. cit. Inconsistent findings can result from differences in subpopulations examined, the particular variables which were controlled, or the way hourly wages were calculated in different studies.

25. S. S. Peng and M. M. Holt, National Longitudinal Study: Tabular Summary of the Second Follow-up Questionnaire Data 2-1/2 Years After High School, 2 vols. (Washington, D.C.: Government Printing

Office, 1977); S. S. Peng et al., National Longitudinal Study: Tabular Summary of the Third Follow-up Questionnaire Data, 4 vols. (Washington, D.C.: Government Printing Office, 1978).

26. The Huron Report, Section 4.4. The Census Occupational Classification was used to derive the three occupational skill levels. These findings were obtained with white and black males.

27. Ibid. The Duncan socioeconomic index (SEI) was used as a measure of occupational status. The SEI provides ratings of occupations from 0 to 96 based on the education and income of people in those occupations.

28. Ibid. This finding was obtained in reanalyses performed with white female samples in two national longitudinal surveys--the National Longitudinal Survey of Young Americans and the NLS-1972--and with the black female sample in the NLS-1972. Similar findings were reported by Peng and Holt, op. cit., and Peng et al., op. cit., though figures were not separately reported for white and black females.

29. The Huron Report, Section 4.4.

30. The other criterion is employers' opinion that students are "well-trained and prepared for employment," labeled "employer satisfaction with performance" in the regulations. No data exist on this outcome in the national longitudinal surveys. Therefore, reanalyses were not performed, and there are no findings to report other than those of prior research which were summarized in Chapter VII of The Interim Report. For a review of studies of employer satisfaction, see Mertens et al., op. cit. In general, prior research indicates that employers usually express satisfaction with vocational graduates' skills and attitudes toward work, though the reliability of some of those reports is questionable.

    It is worth noting that the regulations define employers' satisfaction with vocational students' performance "as compared with performance of persons who have not had vocational education"; however, 61 percent of employers questioned in one study were unable to make this comparison. (See The Huron Report, Section 4.6)

31. The Huron Report, Section 4.5.

32. Ibid. These results were obtained with the NLS-1972 sample. Students' reports of occupational specialities were used. The Education Occupational Cross-Code Index was developed by the Massachusetts Postsecondary Education Commission.

33. The percentage of graduates of other vocational programs combined who were found to hold jobs related to their training 1 year after graduation is 15 for white males, 8 for black males, 23 for white females, and 7 for black females.

34. H. Vincent, *An Analysis of Vocational Education in Our Secondary Schools* (Washington, D.C.: U.S. Department of Health, Education and Welfare, Office of Education, 1969), p. 40. Follow-up data on self-employment were obtained in 1965.

35. The Huron Report, Section 4.7.

36. Creech et al., op. cit.; Peng and Holt, op. cit.; Peng et al., op. cit.

37. The Huron Report, Section 4.8. Self-reports of job satisfaction are subject to positive response bias.

38. Grasso and Shea, op. cit., pp. 22-24.

39. The Huron Report, Section 5.1.

40. Grasso and Shea, op. cit., p. 100. The Duncan SEI was used to measure occupational status. Only high school graduates with exactly 12 years of schooling in the sample of the National Longitudinal Survey of Labor Market Experience were included.

41. The Huron Report, Section 5.2. The only exception to this pattern is the higher rate of advancement of white female graduates of agriculture, distributive education, health, and trade and industry programs combined, in comparison to white female graduates of general or business programs. The heterogeneity of this group, however, makes this finding difficult to interpret.

    The Duncan SEI was used to measure occupational status. Only high school graduates with exactly 12 years of schooling in the NLS-1972 sample were included.

42. Ibid.

43. Commission on National Aid to Vocational Education, "Report (1914)," in *American Education and Vocationalism; A Documentary History 1870-1970*, ed. Marvin Lazerson and W. Norton Grubb (New York: Teachers College Press, 1974).

44. Grasso and Shea, op. cit., p. 43; Vincent, op. cit., p. 17.

45. J. Coombs and W. W. Cooley, "Dropouts: In High School and After School," *American Educational Research Journal 5* (Summer 1968): 343-363; Grasso and Shea, op. cit.; Vincent, op. cit. These

findings were based on national data collected in the 1960's. Methodological problems in estimating dropout rates may account for differences in results of different studies. Problems include differences in response rates between dropouts and non-dropouts in follow-up surveys, patterns of transfers of students between the vocational and general curricula, and underestimates of future dropout rates.

46. The Huron Report, Section 5.3. Because long-term follow-up data on this sample (the National Longitudinal Survey of Young Americans) are not yet available, dropout estimates are subject to change. Rates may vary among students in different occupational specialities.

47. These findings are based on cross-sectional data. See Grasso and Shea, op. cit., Chapter 3, regarding problems of estimating dropout rates with cross-sectional data.

48. Commission on National Aid to Vocational Education, in Lazerson and Grubb, op. cit.

49. Peng and Holt, op. cit.; Peng et al., op. cit. Results were not reported separately for whites and blacks of each sex. No distinction was made between high school graduates with and without postsecondary education.

50. T. W. Hu et al., *A Cost Effectiveness Study of Vocational Education: Final Report* (University Park, Pa.: Pennsylvania State University, 1968).

51. The Huron Report, Section 5.4. Approximately 50 to 55 percent of each group reported that they had voted by 1976. These statistics are consistent with voting behavior nationwide for that period.

52. Ibid., Section 6.1. The Huron Institute conducted this survey of 86 public and private nonbaccalaureate institutions, which included vocational and technical schools and junior and community colleges across the United States. A 5-percent national probability sample was used.

53. It appears that any prerequisites for admission to specific advanced technical programs offered in these nonbaccalaureate institutions can be fulfilled after general admission into the institutions.

54. The Huron Report, Section 6.2. By 1976, or 4 years after graduation from public high schools, graduates of the general curriculum were more likely than vocational graduates to have pursued postsecondary education, including baccalaureate as well as nonbaccalaureate programs (63 and 54 percent, respectively). The

higher percentage of general curriculum graduates, particularly white females, in postsecondary education reflects the greater proportion of general than vocational graduates enrolled in academic programs, often in 4-year colleges.

55. Ibid., p. 6.2.13.

56. D. Breneman and S. Nelson, Financing Community Colleges: An Economic Perspective (Washington, D.C.: Brookings Institution, 1981), pp. 2-25.

57. Excluded from the sample were those who had completed 4 years of postsecondary schooling within 4 years of high school graduation (by October 1976) and those who were enrolled full time in either the fall of 1974 or the fall of 1975. (The latter were excluded because they would not have been in the labor market full time for two years when data on outcomes were collected and because they were more apt to be pursuing a baccalaureate program.)

Separate analyses were performed for white males, black males, white females, and black females. For each of these groups, eight subgroups were examined which represented different combinations of self-reported secondary (general or vocational) and postsecondary (none, academic, vocational, or unknown) programs. Within any of the four sex-race groups, only slight differences were found in socioeconomic status or twelfth grade basic skill scores among the eight subgroups.

In addition to descriptive statistics, two sets of multiple regressions were performed for the eight subgroups. In the first set, gainful employment outcomes of graduates of the secondary general curriculum with no postsecondary education were contrasted with outcomes of each of the other subgroups with a number of variables controlled, including socioeconomic status (the same composite measure used with secondary students), work experience during and after high school, and selected community characteristics. In the second set of regressions, outcomes of graduates of secondary vocational programs who had enrolled in postsecondary vocational programs were contrasted with outcomes of each of the other five subgroups who had had some type of postsecondary education. Variables controlled in this set of regressions were socioeconomic status, type of postsecondary institution, full-time or part-time enrollment, and receipt of a certificate, license, or degree. See Chapter 7 of The Huron Report for information on reanalyses conducted with postsecondary students.

58. In this section, results of several cross-tabular analyses or multiple regressions in which one or more variables were controlled are summarized for any given outcome. Reported results, therefore, are approximate and may vary within a range, depending on

the number and nature of controlled variables. Comparisons with the high school general curriculum are presented here to link these results with those pertaining to secondary curricula in the preceding section. For greater detail see The Huron Report, Chapter 7.

CHAPTER VIII: EQUALITY OF OPPORTUNITY IN VOCATIONAL EDUCATION

Introduction

Although Federal vocational education legislation is an example of economic and human resource development policy, its ultimate goal is to promote equality of opportunity. As the language of the VEA's Declaration of Purpose suggests, the legislation contains within it a number of notions of equity. It is universalist in orientation, embracing "persons of all ages in all communities of the State." By stating that individuals have different needs for, interests in, and abilities to benefit from vocational training, it recognizes that equal opportunity does not always or necessarily mean equal treatment and may instead require a pluralistic approach. Finally, in setting forth the goal of ensuring ready access to vocational education which is of high quality and "realistic in the light of actual or anticipated opportunities for gainful employment," the legislation speaks to the historic link between the commitment to equal educational opportunity and the national interest in promoting economic opportunities.

Despite the universalistic language of the VEA's Declaration of Purpose, it is clear that Congress did not intend Federal funds to be distributed equally to persons of all ages in all communities of the State. Rather, the legislative history of the 1976 amendments indicates that the goal of ensuring ready access to high-quality vocational training to all who seek it is the broad context for the law's more immediate, programmatic aim of assisting the States to improve their services to those groups of individuals who have either been denied equal opportunity in vocational education by official act or been otherwise poorly served by the enterprise. As was noted in the Senate report clarifying the intent of Congress, the Declaration of Purpose

> lists the wide range of individuals who may be beneficiaries from Federally-assisted vocational education programs. . . .

> to underscore the fact that vocational education may be of significant benefit to persons of substantially varying needs, and is not limited to certain institutions or levels of education. However, given the limited amount of Federal assistance available, it is the Committee's intent that scarce dollars will be first devoted to those with greatest needs. (Emphasis added).[1]

Thus, in much the same way that other Federal education policies set forth broad, far-ranging goals and then concentrate resources on those who are most in need of assistance, so too does the VEA give priority to serving persons who have been identified as having the greatest needs in vocational education: women, the handicapped, the academically and economically disadvantaged, and individuals with limited English-speaking ability.

This chapter, then, will examine the extent to which the VEA, as amended in 1976, has affected the ability of the vocational education enterprise to serve women and individuals identified as having special needs. It begins by reviewing the equity themes of Federal vocational education policy from the Smith-Hughes Act of 1917 to the present, and then analyzes the fit between the equity goals of the VEA and the programmatic instruments that Congress devised to improve upon the Act's previous mechanisms for realizing these goals. It next examines the implementation of the equity provisions of the 1976 amendments, and to the extent that the research permits, the impact of these provisions on women and individuals with special vocational education needs.

Although the States and localities are responsible for meeting the requirements of the VEA only when VEA funds are accepted, the vocational education enterprise as a whole is obligated to uphold the Nation's civil rights laws, regardless of the legislative or programmatic source of its Federal funds. Since these laws, specifically Title VI of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, and Section 504 of the Rehabilitation Act of 1973, are closely related in spirit to the equity provisions of the VEA, this chapter will also treat the guidelines promulgated in 1979 by the Office for Civil Rights (OCR), which explain how recipients of Federal funds that offer or administer vocational education programs can meet their civil rights responsibilities.[2] Taken together, then, the elements of this chapter seek to illuminate the extent to which the equity measures of the VEA, as implemented by Federal, State, and local agencies, have been effective in promoting the law's ultimate objective of equalizing opportunities to and in vocational education, a goal that is underscored and supported by the civil rights laws of the United States.

The Evolution of the Equity Goals of Federal Policy

The source of the dual economic and social framework in which Federal vocational education policy has operated, as well as the root of the equity measures of the VEA, can be found in the history of Federal aid to public school vocational education, which began with the Smith-Hughes Act of 1917. Although the motives underlying the vocational education movement and the attempts to secure Federal aid for it were diverse, not insignificant among them was the perception that the traditional academic studies of secondary schools were not meeting the needs of the Nation's "laboring class," swelling number of immigrants, urban poor, and rural youth who were "destined" to enter nonprofessional occupations. In 1914, the Commission on National Aid to Vocational Education, whose recommendations had a considerable influence on securing passage of the Smith-Hughes Act, maintained that

> 1. VOCATIONAL TRAINING IS NEEDED TO DEMOCRATIZE THE EDUCATION OF THE COUNTRY:
>
> (a) By recognizing different tastes and abilities and by giving an equal opportunity to all to prepare for their life work. Equality of opportunity in our present system of education is not afforded to the mass of our children. While our schools are

> opened freely to every child, their aims and purposes are such that a majority of the children are unable to take advantage of them beyond a certain grade and hence do not secure at public expense a preparation for their work in life.

Closely related to this view was the belief that the schools' failure to relate their curriculum more closely to the world of work was undermining the Nation's economic and technical development and its ability to compete in world markets. Vocational education was thus advocated as a means of promoting equality of opportunity by offering adolescents who were either failing to enter high school or dropping out an educational experience that would be relevant to their future roles as workers. At the same time, it was also expected to improve the quality of the labor force and to bolster national economic prosperity.[3]

The early twentieth-century arguments on behalf of securing Federal aid to vocational education contained a number of widespread and untested assumptions about the role of vocational education in promoting both equity and economic development, and the passage of the Smith-Hughes Act gave additional legitimacy and support to these views. However, the Act itself was a relatively terse piece of legislation that made no direct reference either to equity or economic goals. It was not until 1963, when the VEA was passed, that these goals were elaborated and made more explicit. Consequently, it was the design of, and experience with, this "Act to strengthen and improve the quality of vocational education and to expand the vocational education opportunities in the Nation" that established the base upon which the subsequent amendments to the VEA would be built.

The problems that refocused attention on vocational education in the 1960s and informed the making of the VEA were not unlike those underlying the Smith-Hughes Act: poverty and unemployment, the rapid pace of technological development and changing skill requirements, poorly prepared workers, and social unrest. Although the effectiveness of vocational education in meeting the needs of the labor market and promoting equality of educational opportunity had come under serious question, most prominently in the 1938 report of a national committee appointed by President Roosevelt, the belief that vocational education, in principle, could fulfill the claims made for it continued to persist.[4] This view was supported by the panel of consultants appointed by President Kennedy in 1961 to advise the Nation on the condition and role of vocational education. The consultants were sharply critical of existing vocational programs, especially of their failure to meet the needs of the economically and academically disadvantaged. They nonetheless went on to affirm the value of vocational education and concluded that if it were reformed and redirected, it could play a vital role in the Nation's economy and in improving the life chances of youths who "are sometimes called potential dropouts, disinterested, reluctant, disadvantaged, alienated, or culturally deprived."[5]

The panel's report had a considerable influence on the aims and provisions of the VEA of 1963. The legislation introduced an economic criterion in the formula for distributing Federal aid to the States, made specific mention of youths with "special educational handicaps" in its Declaration of Purpose, and, for the first time, explicitly authorized the States to use Federal vocational education funds to serve "persons who have academic, socioeconomic, or other handicaps that prevent them from succeeding in the regular vocational education program."

The VEA introduced three other measures that were primarily concerned with improving the capacity of the States to serve youths with special vocational education needs. In the first (Section 4(c)), the Commissioner of Education was authorized to make grants to help support research, training, and experimental programs to meet the needs of such youths, particularly those in economically depressed communities. The second, which created a separate pool of Federal funds to support State work-study programs (Sec. 13), was derived from the commitment made in the Declaration of Purpose to provide "part-time employment for youths who need the earnings from such employment to continue their vocational training on a full-time basis." In determining the criteria for awarding funds to local education agencies (LEAs), States were required to give priority to applicants serving communities with substantial numbers of dropouts and unemployed youth. The final, explicitly equity-oriented measure of the Act concerned youths, aged 15-21, who were identified as needing vocational education in the context of full-time residential schools (Sec. 14).

Taken together, then, these measures authorizing the use of Federal funds to meet the vocational training needs of persons with special educational handicaps formed the equity base of the VEA. On the one hand, the VEA's permissive directions on how the States could use their Federal funds, as well as its vague and flexible planning requirements, indicated a considerable gap between the commitment to improving vocational services for youths with "academic, socioeconomic, or other handicaps" and the programmatic instruments that were devised to realize this end. In this view, the VEA represented neither a consistent nor an effectively designed policy. On the other hand, its permissiveness and flexibility also implied a belief that the States either shared or were willing to embrace these equity goals. Seen from this perspective, the VEA of 1963 served as a first, clear notice to the States of the objectives of Federal policy, and therefore allowed them some time, some monetary incentives, and a great deal of discretion in gearing up to meet the needs of youth who had been poorly served by vocational education.

As Congress discovered during its consideration of the 1968 amendments to the VEA, the States had by and large chosen not to respond to these incentives. Of the more than $980 million spent for vocational education programs under the 1963 VEA, only $19.8 million, or approximately 2 percent, of the Federal funds were spent on programs for students with special needs. According to the 1967 report submitted by the Advisory Council on Vocational Education, the vocational education enterprise continued to be unresponsive both to the changing needs of the economy and to the problems of disadvantaged students. The Council also faulted the enterprise for failing to address the problems of dropouts, the hard-core unemployed, and adults who required job training or retraining. "For both humanitarian and economic reasons," the report concluded, "persons with special needs deserve special help."[6]

Prompted by this evidence that little progress had been made toward the goal of improving the vocational training opportunities of persons with "special educational handicaps," Congress reconsidered the discretionary language of the VEA and sought to make its equity measures more effective. The result was the introduction of the set-aside device into Federal vocational education policy.

According to the legislative history of the VEA, "set-asides were established to provide a base amount each State must use for programs for students with special needs, and to provide an incentive for the States to target more of their funds on these special needs categories."[7] The 1968 amendments required States to use at least 15 percent of their Federal allotment to fund programs for the disadvantaged (persons with academic, socioeconomic, or other handicaps), and at least 10 percent of their allotment for programs for physically or emotionally handicapped individuals. In addition, a minimum of one-third of a State's allotment for consumer and homemaking education programs had to be directed toward economically depressed or high-unemployment areas (Sec. 161(d)). The Congress also authorized a new, fully federally funded program for the disadvantaged under Section 102(b).

Apart from the introduction of the set-aside requirements and the special program for disadvantaged students, the 1968 amendments tampered little with the basic structure and aims of the VEA. The Declaration of Purpose was amended to include postsecondary students among the intended beneficiaries of the Act, and the definition of "special educational handicaps" was broadened to cover physically and mentally handicapped individuals. These changes, however, did not represent a departure from the 1963 legislation but rather an elaboration of the goals set forth in its Declaration of Purpose. Similarly, although the States were urged, for the first time, to allocate their VEA funds with "due consideration" to handicapped individuals, economically depressed or high-unemployment areas, the relative wealth of local applicants, and the relative costs of their programs, they were essentially free to choose whether or not or how to do so.

The next time that the Congress considered the VEA was in the context of the Education Amendments of 1972. The VEA itself was left virtually unaltered, but a number of the education amendments of that year, Title IX chief among them, were nonetheless directly pertinent to vocational education and to equity. A landmark piece of civil rights legislation, Title IX prohibited sex discrimination in federally assisted educational programs and served as the first legal notice that this barrier to equal opportunity would have to be eliminated (Sec. 901(A)(1)). Moreover, by helping to focus attention on the accumulating evidence of sex discrimination and bias in vocational education, the legislation would play an important role in prompting Congress to consider this problem in its deliberations over the VEA in 1976.

In 1974, Congress reaffirmed its commitment "to establish equal educational opportunity for all children" in passing the Bilingual Education Act. In that same year, Congress also amended the VEA to include persons of limited English-speaking ability within the special needs category and authorized the creation of a separate pool of Federal money to stimulate the development of bilingual vocational training programs (P.L. 93-380, Part J). Congress had found that

> . . . one of the most acute problems in the United States is that which involves millions of citizens, both children and adults, whose efforts to profit from vocational training is severely restricted by their limited English-speaking ability because they come from environments where the dominant language is other than English; that such persons are therefore unable to help to fill the critical need for more and better trained personnel in vital occupational categories; and that such persons are unable to make their maximum contribution to the Nation's economy and must, in fact, suffer the hardships of unemployment or underemployment (P.L. 93-380, Part J, Sec. 191).

As its statement of findings indicated, the Congress viewed bilingual training programs as an instrument both of economic and social policy, a dual and interrelated emphasis which lay at the heart of Federal vocational education policy.

As this brief historical overview of the equity theme in vocational education legislation indicates, by the time that Congress was considering the Education Amendments of 1976, the Federal Government had clearly committed itself to improving the vocational training opportunities of academically and socioeconomically disadvantaged individuals, persons with mental or physical handicaps or whose English-speaking ability was limited, and women--in short, those persons whose opportunities to gain ready access to high-quality vocational training suited to their needs, interests, and abilities had been the most limited. Underscoring this commitment to equality of opportunity for, and in, vocational education are two distinct but related Federal responsibilities: to guarantee and protect the equal rights of citizens, and to promote the national interest in securing a capable, modern, productive work force. Indeed, it is in Federal vocational education policy that the convergence of these historic responsibilities has been most apparent; for the evolving effort to secure equal vocational education opportunities for individuals who have either been officially denied their rights or otherwise deprived of the opportunity to benefit from vocational education has not only been driven by egalitarian concerns. It has also been viewed as a means to the end of enhancing the efficiency and productivity of the Nation's labor force.

The assumption of Federal responsibility for promoting equity in vocational education cannot, of course, be viewed apart from the development of civil rights laws and related legislation. Briefly summarized and kept within the time frame of the VEA, they begin with the Civil Rights Act of 1964, which held that:

> No person in the United States shall, on the ground of race, color, or national origin, be excluded from participating in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance (42 U.S.C. at 2000(d), Sec. 601, Title VI).

One year later, the Congress followed with the most comprehensive program for equalizing educational opportunities ever enacted into law, the Elementary and Secondary Education Act (ESEA) (P.L. 89-110, Title I, 20 U.S.C. 241a), and declared it to be the

> policy of the United States to provide financial assistance . . . to local educational agencies serving areas with concentrations of children from low-income families to expand and improve their education programs by various means . . . which contribute particularly to meeting the special education needs of educationally deprived children (Sec. 101)

Thus, if Title VI of the Civil Rights Act of 1964 was a negative measure prohibiting discrimination, Title I of ESEA established an affirmative responsibility to improve the educational opportunities of the Nation's disadvantaged children.

As has been noted, Title IX of the Education Amendments of 1972 added sex to the grounds on which no person could suffer official discrimination. That same year, the Congress declared it to be "the policy of the United States to provide to every person an equal opportunity to receive an education of high quality regardless of his race, color, religion, sex, national origin, or social class. Although the American educational system has pursued this objective," Congress went on to observe, "it has not yet attained that objective. Inequalities of opportunity to receive high quality education remain pronounced" (Sec. 304 of GEPA, 20 U.S.C. 1221e (P.L. 92-318, as amended by P.L. 93-380 and P.L. 94-482)).

One year later, Congress passed the Rehabilitation Act of 1973, which provided in part that:

> No otherwise qualified handicapped individual . . . shall solely by reason of his handicap, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance (29 U.S.C. at 794).

In 1975, Congress took a more affirmative stance toward disabled children and declared it to be "in the national interest that the Federal government assist State and local efforts to provide programs to meet the educational needs of handicapped children in order to assure equal protection of the law. . . ." The result was the Education of the Handicapped Act, which marked the first time that disabled children were formally assured the right to receive a free and appropriate public education designed to meet their unique needs (20 U.S.C. 1401, P.L. 94-142, Sec. 3, 89 Stat. 774, 775).

Reauthorizing the VEA

In 1976, Congress learned that despite the existence of these civil rights guarantees and related educational service mandates, the vocational education enterprise had made little progress toward ensuring equal opportunity for women and for handicapped, disadvantaged, and limited English-speaking individuals.[8] More specifically, the research made available to Congress during its reconsideration of the VEA revealed that, contrary to the intent of the 1968 equity provisions of the law--the set aside chief among them--the States were still failing to devote more of their own resources to serving students with special vocational education needs.

Between fiscal years 1969 and 1973, the percentage of State and local funds for special needs programs had declined sharply, even though during this same period the enrollment of handicapped and disadvantaged students had increased substantially. According to a report by the General Accounting Office (GAO), in 1973 13 States had spent less than the 15 percent minimum designated for the disadvantaged, while 14 States had not spent the full 10 percent set aside for handicapped persons; 23 States had spent fewer State and local dollars for every Federal dollar for the disadvantaged than they had in fiscal year 1970, and 19 States had simiiarly decreased their own expenditures for the handicapped.[9]

In addition to its analysis of expenditures, the GAO also reported that, in some States, administrators were making a literal interpretation of the VEA's language about using set-aside funds for individuals whose handicapping condition prevented them from succeeding in regular vocational programs. As a result, schools were waiting for these students to fail in regular programs before they offered them any special services or modified regular programs. A somewhat different perspective on the treatment of handicapped persons was presented in a study conducted by the Olympus Research Corporation. Olympus found that 70 percent of all handicapped students enrolled in vocational education were segregated in distinct settings apart from their nonhandicapped peers, a practice that was contrary not only to the aims of the VEA, as it was amended in 1968, but also to the stipulations in P.L. 90-576 about mainstreaming handicapped students and availing them of a broad range of vocational opportunities.[10] Taken together, then, the evidence presented before Congress in 1976 indicated that the States were not fulfilling the spirit and frequently failing even to comply with the letter of the VEA. The problem, however, was not attributed to States and localities alone, but also to the insufficiency of the Federal resource base for encouraging the States to respond to these Federal goals. As the House Report noted, "if the numbers of disadvantaged and handicapped enrollees are to be increased, the impetus must come from additional Federal funds."[11]

By 1976, Congress was also convinced that the impetus for promoting compliance with Title IX and furnishing equal opportunities in vocational education to both sexes would have to come from the Federal Government. One year earlier, the House Committee on Education and Labor had held special hearings on the extent and impact of sex discrimination and sex-role stereotyping in vocational education, and, according to Congress, the testimony presented during that time strongly persuaded it of the need for Federal action. Of particular interest to Congress was the evidence of women's economic need for paid work and of their inferior position in the labor market. "Ninety percent of all women work for pay at some time in their lives," Congress was informed.

> Over 33 million women--44 % of all women of working age--are presently working for pay, and this number comprises about 40% of the total labor force. . . . The vast majority of women work out of economic necessity, since two thirds of all women workers are either single, divorced, widowed, separately, or married to men earning less than $7,000 per year. In addition, female-headed families are on the increase in our society, and now constitute 11% of all families. For minority families the figure is much higher.

Despite their economic need, "women who work . . . earn only 60% of a man's salary . . . are concentrated in lower paying and less skilled jobs, [and] have a much more limited range of traditional occupational fields from which to choose than men."12 Although these patterns were in part attributable to economic and social forces outside the immediate control of the schools, there was also sufficient evidence to indicate that the vocational education enterprise had "done nothing to prevent programs from reflecting the general status of women in society." Enrollment statistics showed that women were "concentrated in a narrow range of courses that are female intensive and low paying," and that "boys have three times as many job options available to them within male intensive programs as girls have in female intensive programs." Some schools, it was found, "actively barred students from certain programs on the basis of sex," in direct violation of Title IX. A survey of 1,400 vocational schools conducted by OCR discovered that "more than 1,000 schools offer five or more vocational courses attended solely by one sex," and witnesses before the committee further testified to "sex discrimination in curricular materials, program publications, and testing instruments."13

By the time the hearings ended, Congress was persuaded that "the inferior position which women now hold in the labor market is being reinforced by many of the current practices in vocational education. We have also concluded that Federal legislation must address this problem if it is to be solved."14 Accordingly, the first step that Congress took was to include among the purposes of the VEA "the development and carrying out of programs of vocational education designed to overcome sex discrimination and sex stereotyping in all occupations, including homemaking. The purpose of such programs would be to furnish equal educational opportunity in vocational education to persons of both sexes." In a sense, then, this amendment to the purposes of the VEA did not expand the responsibilities of the recipients of Federal funds. Rather, it was intended to work in tandem with Title IX and assist the vocational education enterprise to meet its civil rights obligations under law.

> The provisions of Title IX of the Education Amendments of 1972, prohibiting discrimination on the basis of sex in schools and programs receiving Federal assistance, will preclude continuation of discriminatory treatment of male and female vocational students. The expansion of the purpose of the VEA will make it clear that Federal funds may be used to assist local school districts in developing programs designed to meet the requirements of Title IX, as well as programs to overcome sex stereotyping.[15]

Taken together, then, the testimony and research presented to Congress during its reconsideration of the VEA demonstrated that, contrary to the intentions of the 1968 amendments, the needs of handicapped, disadvantaged, and limited English-speaking individuals were still not being adequately met by the vocational education enterprise. Congress further concluded that the vocational needs of women--or, more precisely, the need to eliminate discrimination and stereotyping on the basis of sex, a behavior which affects men as well as women--were also not being addressed, and that States and localities required some Federal stimulation to do so.

The Legal Framework of the Equity Provisions of the VEA

The VEA, as amended in 1976, is a complex piece of legislation that did not so much change the twin economic and social objectives of Federal aid to vocational education as it sought to strengthen the instruments for achieving its goals. With respect to equal opportunity, the law now included some provisions specifically aimed at eliminating sex discrimination and stereotyping in vocational education. In place of its permissive directive that States allocate their Federal funds to LEAs with "due consideration" to their disadvantaged and handicapped populations and to economic and employment conditions, Congress introduced new and more prescriptive requirements (treated in Chapters II and III) that were designed to ensure that Federal funds were used to promote their designated ends. The Act retained the set-aside programs for handicapped and disadvantaged persons, but increased their resource levels and required that a portion of the disadvantaged set aside be used to serve limited English-speaking individuals and to provide stipends for students whose acute economic needs could not be met under other programs of the act. Finally, the Act retained the fully federally funded program for disadvantaged students and gave attention to women and to individuals with special needs in a number of its new planning and other process requirements.

Sex Equity

Despite the heavy emphasis that Congress gave to sex equity in its deliberations, and notwithstanding the pervasiveness of this concern throughout the language of the Act, only two of the law's funding provisions pertaining to this concern are mandatory. For one, each State is required to spend at least $50,000 of its basic grant in each fiscal year to support full-time personnel to assist the State board in assuring equal opportunity to both sexes (Sec. 104(b)(1)(2)). States may augment this amount with Subpart 2 funds or with State administration monies; however, these additional funds are subject to whatever matching requirements govern the part or purpose from which they were taken.[16] The legislation also contains a mandatory nine-part job description for sex equity personnel that emphasizes consciousness-raising, review, and information collection and dissemination activities, and assigns the coordinator a great many responsibilities (see Table VIII-1) and very little authority.

Second, States must spend some portion of their Subpart 2 funds to serve the vocational needs of displaced homemakers, single heads of households who lack adequate job skills, homemakers and part-time workers seeking full-time employment, and persons seeking jobs that are

TABLE VIII-1

FUNCTIONS OF THE SEX EQUITY COORDINATOR

1. Taking such action as may be necessary to create awareness of programs and activities that are designed to reduce sex stereotyping in all vocational education programs
2. Gathering, analyzing, and disseminating enrollment and employment data by sex
3. Developing and supporting actions to correct problems brought to light by such data
4. Reviewing the State distribution of VEA-funded grants and contracts to assure that projects address the needs and interests of women
5. Reviewing all vocational education programs in the State for sex bias
6. Monitoring the implementation of laws prohibiting sex discrimination in employment practices related to vocational education
7. Reviewing and submitting recommendations on the annual program plan and report
8. Assisting local educational agencies and others to improve vocational education opportunities for women
9. Making the information developed through these activities available to various State and national policy and advisory boards concerned with vocational education, as well as to the general public
10. Reviewing Title IX self-evaluations[1]

[1] Introduced in Regulation 104.75(1)

Source: P.L. 94-482, Sec. 104(b)(1)

nontraditional for their sex. However, since each State is free to decide how much it "deems necessary" to spend for this purpose, this requirement is by and large permissive (Sec. 120(b)(1)(L) and 34 CFR at 401.621). Subpart 2 monies may also be used to fund day care for children of students in vocational education programs and to provide support services, such as counseling, job development, and job follow-up, for women who seek training to prepare them for jobs that are nontraditional for their sex (Sec. 120(b)(1) and (J)).

Funds authorized under Subpart 3 of the Act, Program Improvement and Supportive Services, may be used to foster the elimination of discrimination and stereotyping based on sex. Under Section 130, the Commissioner is permitted to make grants to States to assist them in awarding contracts or grants for experimental, developmental, and pilot projects, curriculum development and improvement activities, and programs for training teachers, administrators, and counselors that have as their goal overcoming sex bias. In addition, contracts awarded by a State for exemplary and innovative projects must give priority to proposals aimed at reducing sex stereotyping (Subpart 3, Secs. 130-136). Finally, the authorized uses of grants to States under Subpart 5, Consumer and Homemaking Education, include encouraging males and females to prepare for combining the roles of homemakers and wage-earners and promoting the development of curriculum materials which deal with the changing roles of both sexes at work and in the home (Sec. 150).

Apart from the provision that authorizes the Secretary of Education to use some of the VEA funds reserved for programs of national significance to support activities designed to promote sex equity, the Act allots no other monies for this purpose (Sec. 171(a)(1)).[17] The remainder of the Act, insofar as sex equity is concerned, deals with planning and process requirements that are aimed at getting States to focus more of their attention and activities on this goal and to stimulate their LEAs to do the same.

The sex equity provisions of the VEA are thus mainly hortatory; much is authorized, but little is required. In this sense, although the VEA's declaration of purpose faithfully reflects the intent of Congress to eliminate sex discrimination and sex-role stereotyping, as it was expressed in the legislative history of the 1976 amendments, there is a considerable gap between the prominence that the language of the law gives to this objective and the programmatic instruments that were devised to transform Congressional intent into State and local action.

Students With Special Needs: The Set Asides

The primary means for promoting equal vocational education opportunities for students with special needs are the set asides under the national priority programs. Pursuant to Section 110 of the Act, at least 30 percent of the aggregate amount of funds available under Section 102(a) must be used to serve handicapped, disadvantaged, and limited English-speaking students. This requirement establishes a minimum amount that must be expended; a State may raise this floor if it so desires. Funds used to satisfy these set asides may come from either or both of the pools of funds authorized under Subpart 2 (80 percent of the Section 102(a) allotment) or Subpart 3 (20 percent of the Section 102(a) allotment).

In accordance with this basic framework, the handicapped set aside stipulates that a minimum of 10 percent of a State's allotment under Section 102(a) must be used "to pay for up to 50 percent of the costs of programs, services and activities under Subpart 2 and of program improvement and supportive services under Subpart 3 for handicapped persons" (Sec. 110(a) 20 USC 2310(a)). The regulations interpreted this requirement to mean that set-aside funds can be applied only to the excess costs of serving handicapped individuals; that is, the amount it costs a State to provide such persons with services that is above the cost of serving students without special needs (34 CFR at 400.303(a) and 400.312). The Act further instructs States to use these funds, to the maximum extent possible, to assist handicapped students to participate in regular vocational education programs (Sec. 110(d)).

States are also required to set aside 20 percent of their Section 102(a) allotment to pay at least 50 percent of the cost of serving disadvantaged students, and they must mainstream these students to the maximum extent possible. The 1976 amendments for the first time required States to serve limited English-speaking individuals out of this set aside, by reserving from it a percentage that equals the proportion of such persons aged 15-24 relative to the total population of the State within this age group. Although the level of expenditure for serving these students that is determined by this method can be exceeded, the amount spent for this purpose out of the funds authorized under this particular section cannot exceed the overall 20 percent set aside for the disadvantaged (Sec. 110(b) and Sec. 110(b)(2) and (d); 34 CFR at 400.313(c)(b)).

Once the amount of this internal set aside has been determined, a State has discretion over how much of the remaining funds it will use for vocational programs for disadvantaged persons or for stipends for students who have acute economic needs which cannot be met under work-study programs. As with the handicapped set aside, regulations stipulate that the funds made available under this provision can only be used to pay for the excess costs of programs for disadvantaged and limited English-speaking students, a requirement that does not, however, extend to funds used for stipends (34 CFR at 400.303(b)).

The Matching and Excess Costs Requirements. Among the several different matching requirements of the VEA are those which pertain to the special needs set asides. The VEA included set asides for handicapped and disadvantaged individuals prior to 1976, but it did not require that States match each of these separately. However, when Congress discovered that some States had not spent any of their own resources to meet the needs of these individuals, it decided that a stricter requirement was necessary to ensure that Federal dollars did not supplant State and local funds for this purpose.[18] The 1976 amendments thus required that Federal dollars spent under each of the set asides for disadvantaged and handicapped individuals must be matched dollar-for-dollar with State and local funds that are specifically used to provide services for these students. States, then, must match each of the set asides separately rather than as part of their overall match of VEA funds. At the same time, however, the match for each set aside remains a statewide aggregate match; that is, there is no requirement that each recipient operating a program supported through the set aside must come up with a match for its VEA funds.[19]

The excess costs requirement is also an important part of the legal framework of the Act and has, moreover, been the source of considerable controversy.[20] In April 1977, OE issued proposed regulations on the VEA and interpreted the set-aside provisions to mean that States may use Federal and matching State and local funds to pay for the full cost of vocational education programs for handicapped and disadvantaged students.[21] The States had to submit their program plans under the VEA by July 1, 1977, and could not await the promulgation of the final regulations if they were to meet this deadline. Consequently, even though the full-cost rule was still open to review and revision, it guided the planning of the States. The final regulations, issued on October 3, 1977, replaced the full-cost rule with the excess costs requirements, on the grounds that, if the entire cost of vocational education for handicapped and disadvantaged students were charged against the required minimum of Federal and matching State and local funds under Sections 110(a) and (b), the result might be a reduction in the level of resources available to serve these students.[22]

Since the final regulations were not issued until 3 days after the start of fiscal year 1978 and 3 months after the States had submitted their plans, the States were not required to abide by the excess costs rule until fiscal year 1979. The regulations were clarified on March 27, 1978, after a number of State and local education agencies expressed uncertainty about whether or not the excess costs rule applied both to regular vocational education programs in which students with special needs were mainstreamed and to separate programs. The response would prove consequential: in a regular, or mainstream, program, excess costs are the costs of the extra or supplemental services that a student with special needs receives, over and above the services being received by the whole class, including the extra support that is provided to the instructor. In contrast, if a handicapped or disadvantaged or limited English-speaking student is placed in a separate program, VEA and matching State and local funds can be used for the full cost of operating such a program. The States, however, must make sure that their average statewide expenditure (the sum of State and local expenditures) per special needs student equals or exceeds the average per student expenditure for other students.[23]

Both of these interpretations seek to ensure that the States devote the same level of resources to students with special needs as they do to other students, and that they use VEA and matching State and local funds to provide the additional services these students need to participate in vocational education. However, by making it both administratively and financially more attractive to support separate programs, the regulations implicitly discourage mainstreaming, contrary to the intent of the law. Whether or not they do so in practice will be taken up in the implementation section of this discussion.

Special Programs for the Disadvantaged

The VEA's other major funding provision concerning students with special needs is found under Subpart 4, which authorizes full Federal funding for special programs for the disadvantaged (Sec. 140). States are required to use this separate pool of funds to provide vocational education to disadvantaged students in areas with high concentrations of youth unemployment or school dropouts.[24] They are also required to make specific provision for the participation of students enrolled in nonprofit private schools and must ensure that the various VEA funds for the disadvantaged are not commingled (45 CFR at 104.803). Funds available under this Subpart may be used in addition to funds that a State receives under its basic grant (Sec. 120), but only if they are used to conduct special vocational education programs that are designed to enable disadvantaged students to succeed in regular vocational programs (45 CFR at 104.802).

Consequences of the 1976 Provisions

The research literature produced during the past decade is uncommonly unanimous in agreeing that the relationship between Federal education policies and the outcomes of such policies is neither simple nor direct. Results must be viewed in the context of the design of a law and the successive stages of its implementation at the Federal, State, and local levels, a process that involves actors, settings, and conditions so numerous and diverse that, by the time legislative provisions become classroom programs, the original policy has often been interpreted and adjusted beyond recognition. Frequently, then, it is difficult to discern whether the faults or credits for a policy's outcomes lie with the design of the policy itself or with an implementation process that often loses sight of the spirit, and sometimes even the letter, of the law.

Analyzing the consequences of the equity provisions of the VEA provides a particularly telling illustration of this difficulty, for although Congress made it clear that one of its chief priorities for vocational education was to increase access for women and individuals with special needs, and while the theme of equity pervades the law, much is authorized and relatively little is required. In short, while the 1976 amendments strengthened some of the equity instruments in the VEA, they also continued to give the States a great deal of discretion over whether or not they would further this goal of the law. Technically speaking, then, States and localities could be in compliance with the letter of the law while choosing to ignore its intent.

Sex Equity

As has been discussed, there are two major funding provisions concerning sex equity: States must spend at least $50,000 each fiscal year to support sex equity personnel, who have 10 mandatory functions to perform, and they must also spend an unspecified amount of VEA funds to serve the vocational needs of displaced homemakers. In addition, there are a number of procedural requirements that States must fulfill.

According to the 1979 VEDS data, by fiscal year 1979, all 50 States reported spending some VEA funds to support sex equity personnel, but 24 of them spent less than the mandatory $50,000. Sex equity coordinators seem to be in place in all of the States, and some States support additional staff to assist the coordinator. In nearly three-fourths of the 15 sample States investigated by Abt Associates for the NIE study, the coordinators were performing all 10 of their mandated functions. The extent and depth of the activities conducted under each of these functions varied considerably, with "consciousness-raising" programs for State and local administrators and teachers being the most prevalent and, especially in States with a large population or a large

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number of school districts, the most time-consuming. Coordinators reported that their ability to initiate and follow through on the full gamut of activities mandated by the law depended in large part on their placement within the State agency, their access to and support by the State director of vocational education, and the amount of program funds made available to them. The coordinators were finding it especially difficult to be effective at the task of monitoring a State agency's compliance with laws prohibiting sex discrimination in employer practices. Since local districts were frequently failing to conduct or update Title IX self-evaluations, the responsibility to review these documents was also hard to fulfill.[25]

The requirement that Federal VEA funds be used to support programs for displaced homemakers was being met by 42 States, according to the latest VEDS data. However, this mandatory but unspecified level of expenditure represented only 0.5 percent of VEA funds and less than 0.1 percent of State and local matching monies. Since nearly 60 percent of all reported VEA outlays on programs for displaced homemakers came from only five States--California, New York, Missouri, Washington, and Massachusetts--it is apparent that not only is the level of expenditure for this required activity extremely low, but most States are making only a token gesture toward complying with this provision. The few programs that have been observed in the States that are active on behalf of displaced homemakers appear to be meeting the intent of the law to provide these individuals with training, support services, job counseling, and placement.[26]

The two other sex-equity related provisions of Subpart 2 are permissive. Again, these activities were concentrated in only a few States. Expenditures in California, Oregon, and Washington on support services for women entering vocational programs nontraditional to their sex represented two-thirds of all such expenditures for this purpose, while Texas and Wisconsin accounted for more than half of the reported expenditures on day care.[27] Together, the 4 sex-equity related provisions of Subpart 2 account for 1.3 percent of Federal funds and 0.2 percent of State and local funds. Several of the State administrators interviewed reported that the reason that their State had not used Subpart 2 funds for support services was that this population of women was already being served through displaced homemaker programs authorized by the VEA.[28] Still, given the paltry sums expended for this purpose--even if expenditures under the displaced homemaker requirements are factored in--it is clear that Congressional intent is not being fulfilled. Here again, the States cannot be considered out of compliance with the law, for although the program of support services for women is "one of the key provisions on [sex equity] incorporated into the Act" (42 FR 53882), the provision is permissive.[29]

The pattern of expenditures for grants to support activities to overcome sex bias, authorized under Subpart 3, Program Improvement and Supportive Services, was similar to the record of State expenditures of the Subpart 2 funds authorized for related purposes (see Table VIII-2). Only 25 States spent any funds to support such activities, and together their expenditures accounted for less than 2.0 percent of VEA funds and 0.1 percent of matching State and local funds. Moreover, 6 of these States--California, Maryland, Minnesota, Missouri, New York, and New Jersey--were responsible for 80 percent of the total expenditures for this purpose. However, a comparison of State vocational education plans for fiscal years 1978 and 1980 suggests that both the number of States intending to allocate funds for this purpose and the level of planned expenditures will be increasing. In the meantime, however, the evidence indicates that the response to the availability of Federal funds for grants to overcome sex bias has been extremely poor.[30]

In addition to authorizing funds to promote sex equity, the VEA required States to address the issue of equal access to vocational education by both men and women in their 5-year and annual program plans

TABLE VIII-2

OUTLAYS ON SERVICES TO PROMOTE SEX EQUITY, AS A PERCENT OF EXPENDITURES, FY 1979

	Percent of VEA 120 Funds				Percent of VEA 130 Funds
	Sex Equity Personnel	Displaced Homemakers	Support Services Women	Day Care Services	Grants to Overcome Sex Bias
Alabama	.84	.03	-	-	-
California	.12	.56	.24	.05	2.52
Colorado	.95	.81	-	-	-
Florida	.32	.01	-	-	-
Illinois	.41	-	-	-	2.06
Minnesota	.64	.13	-	-	3.87
New Hampshire	2.46	.90	-	-	-
New York	.20	1.37	-	-	10.26
Oklahoma	.98	.09	-	-	-
Pennsylvania	.16	.46	-	-	-
South Carolina	.69	.40	-	.17	1.39
South Dakota	3.14	.39	-	-	-
Texas	.31	.30	.23	.26	.54
Utah	2.35	.15	-	-	-
Washington	.70	1.96	1.02	.42	.50
United States	.68	.46	.14	.06	1.88

Source: The Vocational Education Data System, 1979

and accountability reports. Although this set of requirements seems straightforward, many States have consistently skirted responding to it in a meaningful fashion.

One problem stems from the way that States have met the requirement to provide incentives to encourage their funds recipients to enroll both men and women in nontraditional courses and to develop model programs to reduce sex bias and sex stereotyping in training for and placement in all occupations (Sec. 107(b)(4)(A)(iii)). The States must adopt at least one incentive for each of the two aims of the provision, and describe them in their 5-year plans; the nature of the incentives is not mandated. When it became clear that a number of States were using plaques and publicity as the chief incentives for accomplishing these goals, OVAE provided guidance on some more effective choices, among them monetary ones. The evidence indicates that a number of States persist in relying on more symbolic gestures.

Another source of difficulty has been the requirement that a State's annual program plan describe the results of the activities it promised to undertake to ensure equal access to vocational programs by both men and women (Sec. 108(b)(1)). According to the Assistant Secretary for Vocational and Adult Education, these results must be expressed as "specific indicators of progress in achieving sex equity, and not as a catalog of activities." A review of the annual program plans indicates, however, that by and large this stipulation was ignored: States have merely been repeating the list of sex equity activities set forth in their 5-year plans.[31]

The final major problem with the implementation of the planning requirements stems not so much from the inaction of the States as from a gap in the VEA's provision pertaining to the applications that LEAs and OERs must make to the States in order to receive Federal funds. The VEA identifies six criteria which a local application must satisfy, and further requires the State board to describe in its 5-year plan the information it will request local applicants to provide to meet these criteria (Sec. 106(a)(4)). The law is silent, however, with respect to the plans of local recipients to overcome sex bias. There is no requirement that an eligible recipient provide the State with information on the steps it will take to discern and eliminate possible sex discrimination and bias in its vocational programs; nor do any of the mandated functions of local advisory councils pertain to this concern. Since the goal of achieving sex equity in vocational education ultimately depends on the practices of local schools and institutions, the absence of such a requirement may be a weakness.

In reviewing the implementation of and compliance with these provisions of the VEA, it is easy to lose sight of their purpose; that is, "to overcome sex discrimination and sex stereotyping in vocational education programs . . ." (Sec. 101). Congress was particularly concerned about the economic impact of women's concentration in a relatively small number of occupational programs that were characterized by low status and low wage opportunities. Ultimately, then, the sex equity measures it devised in the VEA are aimed at furthering women's opportunities in the labor market by ensuring them equal opportunity in vocational education. To assess the impact of the VEA on the status of women in the labor market just 4 years after the passage of the law would be premature, and at any time it would be difficult to establish a direct or causal relationship between vocational education legislation and labor market patterns. It is, however, possible to examine changes in the pattern of female participation in vocational programs over time, and in this way discern the extent to which the goal of sex equity is being realized in vocational education. Judging from such an examination, it is apparent that although females are still heavily concentrated in programs traditional to their sex, there has been a slow but steady decrease in sex stereotyping in vocational education.

According to the 1979 Vocational Education Civil Rights Survey, nearly one-half of the vocational education programs offered in the 10,584 public schools and colleges surveyed by OCR had enrollments that were exclusively either male or female. Women continue to be heavily concentrated in health, consumer and homemaking, occupational home economics, and office programs, and their representation in agriculture, technical, and trade and industrial programs is in each of these cases less than 20 percent. Males and females still enroll in distributive education in roughly equivalent proportions, while female representation in apprentice training programs, especially in area vocational centers, continues to be strikingly low at 8.5 percent. The University of California's in-depth analysis of data from 4 States, discussed in greater detail in Chapter III, also indicates that women are still overwhelmingly concentrated in low-wage opportunity programs. Indeed, in none of these 4 States does the proportion of females in high-wage opportunity programs exceed 11 percent at the secondary level and 13 percent in postsecondary institutions.

The findings of these and other recent studies clearly indicate that sex stereotyping is still a widespread problem in vocational education.[32] At the same time, however, the status of women in vocational education has improved, beginning with the passage of Title IX and continuing through since the introduction of the sex equity provisions of the VEA. As shown by Table VIII-3, female participation in agriculture programs, for example, went from 5.3 percent in 1972 to 14.9 percent in 1977, and in 1979 was 19.2 percent. Female enrollments in technical programs increased as well, while the decrease in the proportion of women in consumer and homemaking and occupational home economics programs, where women have traditionally predominated, suggests that more males have chosen this option and the programs have thus become slightly less sex stereotyped.

An examination of female participation rates in selected occupa-

TABLE VIII-3

PERCENT OF TOTAL ENROLLMENTS IN VOCATIONAL EDUCATION PROGRAMS, BY PROGRAM AREA AND SEX, FY 1972, 1977, AND 1979

	1972		1977		1979	
Program Area	Male	Female	Male	Female	Male	Female
Agriculture	94.7	5.3	85.1	14.9	80.8	19.2
Distribution	54.8	45.2	50.3	49.7	46.4	53.6
Health	15.4	84.6	21.8	78.2	15.7	84.3
Consumer and homemaking	7.9	92.1	18.4	81.6	20.6	79.4
Occupational home economics	14.0	86.0	18.4	81.6	22.2	77.8
Office occupations	23.7	76.3	24.9	75.1	26.5	73.5
Technical	90.3	9.7	83.0	17.0	82.5	17.5
Trade and industrial	88.4	11.6	85.6	14.4	85.1	14.9

Source: NCES, The Condition of Vocational Education, 1981 tionally specific programs, which together account for almost three-fourths of all such vocational education enrollments, also reveals that women are beginning to move away from programs traditional to their sex. Most of this movement has been into programs that have not been readily identifiable on the basis of sex, but there is some evidence of a growing tendency for women to enroll in nontraditional programs. For example, as Table VIII-4 indicates, in 1979 women accounted for only approximately 17 percent of the enrollment in agricultural production, but this figure represents an increase of almost 13 percentage points over their 4.0 percent participation rate in 1972. Similarly, in 1972 women represented 9.5 percent of the enrollment in police technology; by 1979 their proportion was 22 percent.

Women's participation in nontraditional programs remains markedly low. Placed, however, in the context of the longstanding history of discrimination and stereotyping on the basis of sex, the changes that have been registered in vocational education enrollment patterns are nonetheless noteworthy. It would also not be unreasonable to conclude that, while these changes cannot be causally linked to either Title IX, the VEA, or to other legislation directly concerned with sex equity, these laws have helped legitimate and support the choices of all students who seek access to programs that are nontraditional to their sex.

Students with Special Needs

The primary mechanisms in the 1976 amendments for stimulating States to improve their vocational education services for handicapped, disadvantaged, and limited English-speaking persons are the mandatory set asides from Subparts 2 and 3 and the special programs for the disadvantaged under Subpart 4. Since these mechanisms and the requirements underlying them were designed to raise the level of State and

TABLE VIII-4

CHANGES IN PERCENT OF FEMALE ENROLLMENT IN SELECTED OCCUPATIONAL PROGRAMS, FY 1972 to FY 1979

Program	FY 1972	FY 1979	Change
Agricultural production	4.0	16.7	12.7
Agricultural mechanics	1.1	9.9	8.8
Horticulture	26.9	39.7	12.8
General merchandise	51.2	54.9	3.7
Real estate	32.9	50.1	17.2
Nursing-Associate degree	90.0	89.6	- 1.3
Practical nursing	94.4	92.3	- 2.1
Care and guidance of children	92.8	89.9	- 2.9
Food management, Equipment services	75.2	67.9	- 7.3
Accounting and computing	59.7	66.7	7.0
Programming	49.0	47.9	- 1.1
Other business data processing	49.0	63.2	14.2
Filing, Office machines, General office	82.8	80.4	- 2.4
Stenography, Secretarial and Related occupations	96.0	89.1	- 6.9
Supervisory, Administrative management	28.0	50.8	22.8
Typing, Related occupations	79.6	78.5	- 1.1
Other office occupations	72.0	82.6	10.6
Electronic technology	2.1	11.5	9.4
Police science technology	9.5	22.8	13.3
Other technology	2.0	31.3	29.3
Body and fender repair	1.9	6.9	5.0
Auto mechanics	2.2	8.6	6.4
Carpentry	1.5	8.2	6.7
Other construction and maintenance	2.0	8.3	6.3
Drafting	5.1	17.6	12.5
Electronics	4.1	5.6	1.5
Graphic arts	11.6	28.4	16.8
Machine shop	1.0	8.5	7.5
Welding and cutting	1.0	7.5	6.5
Cosmetology	94.0	76.1	17.9
Other trade and industrial	18.0	24.2	6.2

Source: The Vocational Education Data System, 1979

local expenditures for special needs populations relative to Federal support, the first question to address is whether or not they have.

A secondary analysis of BOAE data for fiscal year 1978 indicated that the level of State and local matching for Federal handicapped and disadvantaged funds had increased since 1973. However, Abt Associates' examination of 15 sample States revealed that, during the same fiscal year, none of them spent all of its respective set asides and Subpart 4 monies.[33] By fiscal year 1979, 32 of the States had spent the 10 percent set-aside funds for handicapped individuals, and half the States had spent the 20 percent set aside for the disadvantaged. (The pattern of these expenditures is reported in detail in Chapter III.)

A number of States have complained that the matching requirements for set asides were making it difficult for them to spend these funds. Some States even began to impose some matching requirements on LEAs and other eligible recipients, in spite of the fact that States are expressly forbidden to withhold Federal funds to serve students with special needs from subrecipients that are unable to help finance the statewide match. This prohibition assumes that a State will be able to find the funds--for example, from overmatches in some districts or in State programs--to compensate districts that cannot help meet the match. To the extent that this assumption is not always borne out, the matching requirements may have prevented some States from spending all of their set-aside funds. Nonetheless, many States have had no problems generating the required match, and few seem to have burdened needy LEAs.

In the 1979 Technical Amendments to the VEA, Congress responded to these complaints by permitting States to increase the Federal share of these set asides beyond 50 percent--and, accordingly, to reduce their own share--by making a greater amount of such Federal funds available to LEAs and OERs that, in the absence of such additional funds, would be unable to offer programs to disadvantaged, handicapped, and limited English-speaking students. In effect, then, this amendment allows financially hard-pressed States to reduce their matching effort below a dollar-for-dollar basis (P.L. 96-46, Section 5(b)). On April 28, 1980, the Department of Education published proposed rules for implementing this amendment. The notice sets out the criteria for demonstrating financial inability and stipulates that States qualifying for the matching adjustment must use additional Federal funds from their basic allotments under Subparts 2 and 3 "to substitute for categorical matching funds that the State is unable to provide . . . [so that] total current expenditures for disadvantaged persons will not decrease."[34] Whether or not this amendment will eliminate the problem some States have had with spending VEA set-aside funds--and end the illegal practices that some resorted to--is still an open question, for the final regulations have not yet been promulgated.

The excess cost regulations, in particular, have been a frequent source of State and local complaints and implementation problems. As was previously noted, if handicapped or disadvantaged students are mainstreamed in regular vocational education programs, VEA and matching funds must be used to pay for the costs of the additional services these students receive in the class or school; that is, the costs above those incurred by serving vocational education students without special needs. In contrast, States may use these funds to pay for the full cost of operating vocational education programs that are intended solely for students with special needs, so long as the average statewide expenditure per handicapped and disadvantaged student equals or exceeds the average per student expenditure for all other students.

The excess cost regulations raise two major issues with respect to the purpose of the special needs set asides and Congressional intent. The first is whether or not they are stimulating States and localities to spend their set asides, and the other is whether or not they are furthering the goal of mainstreaming students with special needs into regular vocational programs to the maximum extent possible.

On the first issue, there is considerable evidence that State and local officials have been extremely conservative in implementing the excess costs regulations. Some local agencies seem not to be claiming all of the expenses for which they could be legitimately reimbursed, or are making "safe" expenditures--on equipment, for example--that do not necessarily represent the best use of these funds to serve students with special needs. Other local agencies prefer not to use these set-aside funds at all, for they fear that their excess costs claims will be found in error during an audit. According to some State officials, the problem stems from the lack of clear examples of and consistent technical advice on permissible excess costs expenditures. Other respondents cite the difficulty of tracking and accounting for additional services, especially when students with special needs are mainstreamed and the costs of serving them need to be traced for each student individually. Few LEA accounting systems are able to provide the type of documentation required by the regulations, and, even when they can, the financial and administrative burden of doing so may outweigh the prospect of receiving set-aside funds.[35]

These complaints are supported by the results of a survey of secondary and postsecondary districts in a sample of 10 States that together account for 39 percent of the Nation's vocational education students, 34 percent of Federal VEA funds, and 48 percent of total State and local expenditures for vocational education. Sixty-four percent of the secondary and 80 percent of the postsecondary LEAs reported that they had handicapped students mainstreamed in regular vocational education programs, but, as Table VIII-5 shows, only 22 percent of the secondary and 37 percent of the postsecondary respondents reported incurring excess costs for these students. Similarly, over 70 percent of secondary and over 90 percent of postsecondary LEAs said that they had mainstreamed disadvantaged students, but only 23 percent and 42 percent, respectively, reported incurring excess costs. Given that few of these States had sizable populations of non-English-speaking individuals, it is not surprising that only 17 percent of their secondary LEAs reported having students with limited English proficiency enrolled in vocational education. But even among those LEAs, less than one-fifth said they had incurred excess costs in serving these students. Fifty percent of postsecondary LEAs reported having this population represented in their vocational education programs, and only 20 percent incurred excess costs.

TABLE VIII-5

PERCENT OF DISTRICTS INCURRING EXCESS COSTS FOR STUDENTS WITH SPECIAL NEEDS, FY 1979

Population and Type of Service	Percent Secondary	Percent Postsecondary
Disadvantaged		
Mainstreamed	22	37
Special classes	22	29
Handicapped		
Mainstreamed	23	42
Special classes	18	36
Limited English-proficient	4	20
Number of respondents	550	211

Source: An Analysis of the Distribution of Funds for Vocational Education: A Survey of Ten States, University of California, 1981

Although these findings may indeed mean that a relatively small number of LEAs incurred excess costs, it is more likely that many of them were unable to keep track of such costs or found it too burdensome to do so. The strong positive relationship that the University of California found between the size of an LEA and the proportion of LEAs reporting excess costs for handicapped students would certainly support this view, for larger LEAs may find it easier and more advantageous to track such costs than districts serving smaller geographic areas and populations of special needs students.

Another striking finding of this survey, as Table VIII-6 indicates, is the relatively small amount of expenditures these excess costs represent. Total excess costs for mainstreamed handicapped students ranged from as little as $95 in one secondary LEA to $524,000 in another, and these costs did not exceed $7,100 in half of the secondary LEAs. In over half of the postsecondary LEAs, VEA allocations for mainstreamed handicapped students did not exceed $12,500. Similarly,

TABLE VIII-6

MEDIAN EXCESS COST EXPENDITURES
FOR DIFFERENT TARGET POPULATIONS, FY 1979

	Median Total Excess Costs		Median Excess Cost Per Student	
Target Population	Secondary	Postsecondary	Secondary	Postsecondary
Mainstreamed handicapped	$ 7,100	$ 25,000	$ 375	$ 455
Special programs handicapped	22,000	50,000	833	1,070
Mainstreamed disadvantaged	12,000	34,500	151	166
Special programs disadvantaged	30,000	45,000	505	413
Students with limited English-speaking proficiency	11,000	7,050	331	200
Number of respondents	550	211		

Source: An Analysis of the Distribution of Funds for Vocational Education: A Survey of Ten States, University of California, 1981.

the median total excess costs for mainstreamed disadvantaged secondary students was $12,000, so total VEA allocations for these students did not exceed $6,000 in half of the LEAs. Considering the paperwork effort that districts have to make to claim excess costs, these sums are small indeed. Finally, and as might be expected, the excess costs for separate, special programs were considerably higher than those incurred for mainstreaming students, mostly by a factor of two or three.[36]

In light of these findings, it would seem that when ED interpreted excess costs for separate programs to mean that VEA funds could pay the full costs of such programs, it inadvertently provided a strong incentive to segregate students with special needs, contrary to the intent of Congress. However, the evidence on whether States and localities are in fact responding to this incentive not to mainstream is not conclusive. Abt Associates found that, during the 1979-80 school year, VEA handicapped and disadvantaged funds were no longer used predominantly to support separate programs in the 15 States they studied.[37] In contrast, the study of local communities conducted by A. L. Nellum and Associates found that the number of students with special needs participating in regular vocational programs continued to be small, though the ostensible reasons for this varied.[38] If academically disadvantaged students are subdivided into those who are only slightly below national norms on standardized tests and those who are considerably below the norm and likely also to have exhibited behavioral problems or to be inclined to drop out of school, then the latter group tended to be placed in separate programs if they resided in relatively large communities that already had such programs and in the general curriculum track in communities that had no separate, alternative vocational programs. Students who were only slightly academically disadvantaged were generally excluded from participating in regular vocational programs and required instead, because of a district's proficiency standards for graduation, to take remedial academic courses.

The most prevalent practice of serving handicapped students across all the sites visited for this study was to place them in separate vocational programs. Minimally physically or mentally handicapped students tended to be found in self-contained programs within comprehensive high schools, while more severely disabled students were generally placed in special programs in separate facilities. The handicapped students most likely to be mainstreamed were ones with physical, sensory, or speech disabilities that did not prevent them from participating fully in a regular, unmodified classroom. Thus, in almost all of the communities that received VEA set-aside funds for the handicapped, school personnel identified separate programs that were supported, and sometimes initiated, with those funds. Similarly, districts that offered separate, alternative vocational programs for students with severe academic problems generally used their set-aside funds for the disadvantaged to fund these programs.[38]

Taken together, then, the evidence indicates that the regulations pertaining to excess costs are vague and burdensome.[39] Although the research presented here does not provide a solid basis for concluding that the dual interpretation given excess costs by the Department of Education has, in practice, discouraged mainstreaming, at the very least, the language of the regulations tends to undermine the VEA's intent that "each State shall use, to the maximum extent possible," the funds set aside for handicapped and disadvantaged persons "to assist [these individuals] to participate in regular vocational education programs" (Sec. 110(d)).

In the final analysis, however, neither the interpretation of matching and excess costs requirements of the special needs set asides nor the problems of implementing them can be taken as evidence that the instruments, per se, are inappropriate or unworkable for attaining the ends they were designed to promote. For, as State directors of vocational education and other administrators who were interviewed readily admitted, without the set-aside provisions most States would not be spending even the current relatively modest level of VEA funds on special needs populations.[40] Furthermore, matching requirements are applied not only to these set asides but to other provisions of the VEA, as well. No similar complaints or problems about meeting these other matches have been registered in the research.

The evidence instead points to the need for reworking the regulations on excess costs--Title I guidelines provide a useful model--rather than to rejecting the concept of excess costs itself. To repeal the excess costs requirement would mean that VEA funds could be used to supplant State and local funds that vocational education students with special needs are as entitled to receive as their more privileged peers. Consequently, although there are a number of serious weaknesses in the current excess costs regulations, the justification for their promulgation is clear and sound. If set-aside funds are to guarantee effective equal opportunity for handicapped, disadvantaged, and limited English-speaking individuals, then some application of the principle of excess costs is necessary. Laws assuring the rights to equal opportunities of these individuals exist, quite apart from the VEA. VEA funds for these students, as the Act's references to P.L. 94-142 suggest, can make it possible to implement these laws more effectively by helping to pay for the extra costs associated with the additional services that many students with special needs require in order to gain access to or participate more fully in vocational education.

Special Programs for the Disadvantaged: Subpart 4. According to the latest VEDS data, most States are spending their Subpart 4 funds, and many of them are also reporting substantial outlays of State and local monies for special vocational programs for the disadvantaged, even though no match is required. Four States reported spending less than one-half of their authorized Federal funds in this category. However, only 7 additional States spent less than three-fourths of the

Federal funds authorized them, while 27 States reported outlays of Subpart 4 funds that either equalled or exceeded the amount authorized them. Since unliquidated obligations account for this discrepancy in only a few States, it is likely that this finding is a result of carrying over Subpart 4 funds from previous fiscal years.[41]

Administrators in States studied by the NIE noted that vocational programs for the disadvantaged funded under Subpart 4 and those supported with set-aside monies are generally identical in design. Subpart 4 funds are targeted on areas with high youth unemployment and school dropout rates, so it is not unusual to find these funds being used to support alternative programs for potential dropouts. Some administrators reported having problems targeting these funds, since accurate figures on youth unemployment and school dropouts do not exist at the State level, much less the district level. Moreover, once funds are filtered to LEAs, it is difficult to discern whether or not they are going to the neediest schools. By most accounts, local administrators give each school at least some VEA monies, a practice which tends to dilute the impact not only of Subpart 4 funds but of set-aside monies in general.

States were having little or no difficulty identifying academically disadvantaged students to serve, largely because of statewide or local testing programs. The VEA also includes poverty as a criterion of disadvantagement, but States and localities were making little or no effort to identify economically disadvantaged students and to offer them special programs, except insofar as these students were also academically disadvantaged. Although the legislative history indicates that Congress believed that "economic disadvantage is the clearest hardship which a person can have in order to show the need for additional services," the VEA's inclusion of poverty, per se, as a criterion of eligibility for special vocational educational programs may be inappropriate.[42] In Title I of ESEA, for example, an income factor is used only to determine the eligibility of schools for assistance; students are served on the basis of academic disadvantage. Moreover, although academic and economic disadvantages tend to be related--and it is reasonable and desirable to design programs with this relationship in mind--there is a strong historic ethic against singling students out solely on the basis of their economic situation. States and localities are in fact mostly following Title I's definition of disadvantaged, which focuses on academic problems, rather than the VEA's. To the extent that they seek to determine the economic situation of a student, it is mostly to establish eligibility for VEA programs that offer financial assistance, such as work-study or stipends.[43]

The VEA and the OCR Guidelines

The provisions in the VEA that focus on women and on individuals who are handicapped or disadvantaged or who have limited English-speaking ability are concerned with assuring equal opportunity in vocational education and are inseparable from the Nation's civil rights laws. From this perspective, the equity measures of the VEA may be regarded as the programmatic applications of these laws to vocational education, and the Federal funds behind these measures as means for helping recipients meet their civil rights obligations. To be sure, the VEA's equity provisions were not explicitly designed to enforce civil rights laws. However, since States and localities are responsible for complying with these laws whether or not they accept VEA funds, and because of the widespread evidence that they were failing to do so, the equity provisions of the Act provide them with additional guidance and financial assistance to fulfill their legal obligations to students suffering denial of equal opportunities to vocational education.

On March 21, 1979, OCR published a set of guidelines that explained the civil rights responsibilities of recipients of Federal funds offering or administering vocational education programs, and that also served to clarify the relationship between civil rights laws and the administrators and beneficiaries of the VEA. The guidelines were issued as a result of a 1977 Federal district court injunction, pursuant to Adams v. Califano, which cited OCR for failing to enforce civil rights requirements in vocational education. They were also a response to the substantial evidence that had been accumulated, both by the Department and independent civil rights groups, of widespread and continuing discrimination in vocational education. In adopting these guidelines, the Department thus intended to help State and local administrators meet their civil rights obligations under law by specifically delineating how Title VI of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, and Section 504 of the Rehabilitation Act of 1973 applied to vocational education programs. No less significantly, the guidelines were also aimed at ensuring that the Federal government fulfill its responsibility to enforce compliance with the Nation's law.[44]

The vocational education guidelines represented the first implementation of a new and more decentralized strategy for achieving civil rights compliance that the Department intended gradually to apply to all its agencies and funds recipients. Previously, OCR alone was responsible for securing compliance with and enforcement of civil rights laws in education. Federal program agencies were not specifically required to help discern whether applicants for Federal aid or the recipients that they monitored were taking account of these laws in their plans and activities. Similarly, although recipients were prohibited by law from engaging in any activity that fostered discrimination, they were not formally required to ensure that their subrecipients of Federal aid used these funds in a nondiscriminatory manner.

The processes of distributing Federal aid and overseeing federally assisted education programs and of planning and running these programs at the State and local levels were therefore totally independent of the process of monitoring and enforcing civil rights compliance. The result was a number of problems, at the Federal, State, and local levels alike, that served to undermine the goals of guaranteeing equal opportunity. The then Department of Health, Education, and Welfare became particularly concerned that, when it acted on civil rights violations and initiated proceedings to recover Federal funds, it would ultimately hurt students more than punish violators. For by the time this step was taken, the educational programs supported by these funds were well underway. If Federal aid were interrupted or terminated, so too would be the programs such funds supported, to the detriment of all students.

According to the new strategy, as first outlined in the vocational education guidelines, lead responsibility for enforcement would still rest with OCR, but Federal program offices and recipients of Federal funds were to take a more active role in ensuring that civil rights laws were observed by making this concern a more routine part of their respective activities. Thus, a particularly noteworthy feature of the guidelines is that at the same time as they clarified and rationalized the Federal role in civil rights enforcement, they also expanded the State role in securing compliance with the law.

The guidelines require State agencies responsible for the administration of vocational education programs to adopt a compliance program of their own to prevent, identify, and remedy discriminatory actions on the part of their subrecipients. In designing their programs, State agencies must make provisions for collecting and analyzing civil rights-related data that subrecipients compile for their own purposes or that are submitted to State and Federal officials under existing authorities; for conducting periodic reviews of selected subrecipients to determine whether they engage in unlawful discrimination, notifying noncompliant subrecipients of the steps they must take to be within the law, and attempting to obtain voluntary compliance; for providing technical assistance to subrecipients if they so request; and for periodically reporting their activities and findings to OCR. State agencies are not obligated to terminate or defer financial assistance to any subrecipient, nor are they required to conduct hearings.[45]

The guidelines cover the distribution of Federal financial assistance and other funds supporting vocational education; access and admission of students to programs; counseling and prevocational programs; equal opportunity in the instructional setting, which refers, among other things, to accommodations for handicapped individuals and student financial assistance; work-study, cooperative vocational education, job placement, and apprentice training; and employment of faculty and staff. Thus, the guidelines speak to a number of issues that are directly related to the VEA, most particularly in the section on funds distribution, which "must be read in conjunction with the Vocational Education Act and Office of Education implementing regulations," and more generally in the guidance they provide on how to guarantee equal opportunities to women and to individuals who are handicapped or whose English language skills are limited.[46]

By March 21, 1980, each State agency charged with overseeing vocational education programs was required to have submitted to OCR the methods of administration (MOA) it had designed to carry out its compliance responsibilities. Pursuant to this requirement, OCR had issued a memorandum of procedures, developed with the support of BOAE and the Office of General Counsel, which provided suggestions and more detailed criteria for designing acceptable MOAs. State officials interviewed on this subject unanimously agreed that this memorandum was a clear and helpful document, a view that a legal analysis of the memo supports. Each State is also required under the guidelines to submit an annual compliance report, which in effect describes the implementation of its MOA.

Despite the fact that for about a decade arguments had been made concerning the readiness, willingness, and ability of States to assume greater responsibility for enforcing civil rights laws, a number of States objected to the more active role the vocational education guidelines gave them. Some of the State agencies that commented on the guidelines before they were finalized argued that enforcement was OCR's responsibility, not theirs, and that following the guidelines would impose too great a burden on them and jeopardize their relationships with local agencies and other subrecipients of funds. OCR pointed out that State agencies were already legally responsible for being "certain that they do not 'require, approve of, or engage in' any unlawful discrimination" in performing activities pursuant to State or Federal law; the guidelines thus merely restated existing legal requirements and demonstrated their application to decisions that States routinely made in administering vocational education programs. To further clarify the balance of responsibilities between the States and the Federal Government, OCR noted that it neither intended nor expected to delegate its obligation to enforce civil rights laws. Rather, the

> Guidelines contemplate adding, not substituting, resources for civil rights compliance activities. The Bureau of Occupational and Adult Education presently monitors State agencies for compliance with the Vocational Eduation Act. Under the Guidelines, BOAE and State agencies will engage in activities supplementary to those of the Office for Civil Rights. These Guidelines do not contemplate any reduction of OCR compliance and enforcement activity. And OCR will lead, assist and monitor BOAE and State agencies in their civil rights activities. This approach derives from the Department's commitment to bring all of its agencies and recipients to the critical task of obtaining compliance with civil rights laws and regulations. It is also supported by the United States Civil Rights Commission.[47]

To the extent, then, that the guidelines added to the legal responsibilities of the States, it was by requiring them to monitor subrecipients for compliance. Technically speaking, even this requirement was not new, for it was derived from one of the Title VI regulations which had not, however, been implemented.[48]

As OCR indicated, the guidelines also changed the Department's role in enforcement. In keeping with the Department's new strategy of obtaining civil rights compliance, BOAE was now expected to incorporate civil rights concerns into its role of monitoring State agencies for compliance with the VEA. As noted, this strategy did not reduce OCR enforcement responsibilities. Rather, the idea was to effect a closer working relationship between OCR and the Department agencies that were most familiar with the programs that Federal funds supported, for in having a greater understanding of the needs, problems, and activities of the States, these agencies were in a position not only to supplement OCR's activities, but also to assist the States in meeting their civil rights obligations.

In July 1980, the Assistant Secretary for Civil Rights and the Assistant Secretary for Vocational and Adult Education signed a memorandum of understanding (MOU) that formalized the Department of Education's commitment to encourage cooperation between its agencies and set forth the respective duties and expectations of OCR and OVAE in implementing the vocational education guidelines. According to the MOU, OVAE would conduct the initial review of the State's MOAs and then forward them, with its recommendations for approval or disapproval, to OCR. OCR would then review the MOAs and recommendations and make a final determination in consultation with OVAE. If an MOA was found unacceptable, OCR would negotiate and offer technical assistance to the State. An earlier draft of the MOU had also provided that "BOAE will not issue a State's final annual program grant award until OCR has approved its Methods of Administration." This sentence was deleted in the final MOU, a change which seems to undermine the aim of trying to review civil rights problems before Federal program funds are released rather than having to initiate proceedings to recover illegally used funds after the activities they support are well underway. The MOU did, however, give OVAE responsibility for monitoring State implementation of the MOAs, in addition to its responsibility for monitoring compliance with the VEA. Technical assistance to the States was also to be provided by OVAE, and reviews of and decisions on the annual compliance reports from State agencies were to proceed in a similar fashion.

The extent to which the States are coordinating the requirements and advice contained in the guidelines with the requirements and regulations pertaining to the VEA cannot be addressed at this time. For one, the full story of the implementation of the vocational education guidelines is beyond the scope of this report. Second, since the guidelines were issued only a little over 2 years ago, and their implementation has been characterized by a number of delays, it is too early to assess fairly their impact. It is not, however, premature to analyze them and the civil rights compliance strategy that they address.

On the whole, the guidelines are clear and consistent, and meet their stated intention of helping recipients of Federal funds offering or administering vocational education programs to understand their civil rights obligations. Moreover, since recipients of Federal funds are enjoined from contributing to, as well as engaging in, unlawful discrimination, the guidelines serve to protect States by authorizing them to seek reasonable assurances that their subrecipients are complying with the law. Their chief weakness is their ambiguity with respect to what establishes a presumption of discrimination. Key terms in the guidelines, such as "disproportionate adverse effect" and "predominant enrollment," are not defined and there is little guidance on how to interpret them. Although this lack of specificity allows for a greater sensitivity to the particular demographic and other circumstances of individual States, it may also lead to problems in interpretation, implementation, and enforcement. The fact that officials responsible for administering the guidelines in a number of different States all had different understandings of what standards to apply further argues the need for clarifying the conditions that establish a presumption of discrimination.[49]

Nevertheless, the guidelines represent a promising new effort to devise a means for securing compliance with the Nation's civil rights laws. They promote cooperation and coordination between the Federal Government and the States and, by demonstrating the interrelationships among these laws and showing, in one document, how they all can be implemented, they help fashion a comprehensive view of civil rights compliance out of the separate laws and regulations that protect equal rights. After years of debate about whether or not the States are ready, willing, and able to assume a more active role in civil rights compliance, there is now a mechanism in place which will permit these arguments to be tested. The implementation and results of the vocational education guidelines should therefore be followed with great interest.

Summary

The theme of equity has figured prominently in the history of Federal vocational education policy, most explicitly since the enactment of the VEA in 1963. In 1968 and again in 1976, in response to evidence that the vocational education enterprise was not adequately serving students with special needs and that States were failing to take advantage of Federal funds available for this purpose, the Congress enacted increasingly specific and, in some cases, prescriptive provisions aimed at achieving the equity objectives of the legislation. The changes introduced in the VEA were intended to improve the capacity of the States to provide programs and services to reduce sex discrimination and sex stereotyping and to open up vocational education opportunities for individuals who are disadvantaged, or handicapped, or whose proficiency in English is limited.

With respect to sex equity, there is marked inconsistency between the prominence given this aim in the rhetoric of the VEA and the programmatic instruments adopted in 1976 to achieve it. Much is authorized, but little is required, and the States, by and large, are spending a relatively small amount of VEA funds for this purpose. The requirement to hire sex equity personnel has been met by all States. States may augment this mandatory Federal expenditure for sex equity functions from other VEA funds, but few have chosen to do so. The States are also required to spend an unspecified amount of VEA funds to support programs for displaced homemakers. Although 42 States reported such expenditures, almost three-fifths of all VEA outlays for this activity were accounted for by only 5 States. For the Nation as a whole, expenditures on programs for displaced homemakers were extremely low. The other sex equity provisions of the legislation are permissive, and States have taken little advantage of the Federal funds available for this purpose. Finally, although enrollment patterns indicate that vocational education programs are still markedly sex stereotyped, steady progress has been made toward the goal of sex equity in recent years.

The VEA's provisions for serving students with special needs are complex and more prescriptive. In fiscal year 1979, a significant minority of the States had not spent their mandatory set-aside funds for handicapped individuals or for disadvantaged and limited English-speaking students. A few States claimed that the separate match required for these set asides made it difficult for them to spend these funds, a problem which the 1979 Technical Amendments to the VEA, permitting the use of Federal funds for match purposes, were in part intended to alleviate. As of September 1981, the final implementing regulations had not yet been issued. The excess costs requirements have occasioned much greater criticism on the grounds that they are vague and difficult to implement and they discourage mainstreaming and undermine the intent of the set aside. However, some application of the principle underlying excess costs is nonetheless warranted, for unless

Federal funds supplement State and local funds, and do not supplant them, it will be difficult to achieve the objective of improving the States' capacity to serve students with special needs. The States have far less difficulty spending monies on the special programs for the disadvantaged which are fully federally funded. There appears, however, to be little or no difference between the design or targeting of these programs and those supported by the set aside for the disadvantaged.

No definitive report can be made on the consequences of the VEA's provisions for students with special needs, but it is safe to conclude that the successive amendments to the 1963 Act, in combination with civil rights laws, have slowly but steadily stimulated the States to making a greater effort to meet the needs of these students. The legal framework under which States devote a certain percentage of VEA funds and matching monies to this purpose is flawed, and there have been problems in its implementation. However, without these provisions the likelihood is great that States and localities would not devote even the relatively modest resources they now do to serving handicapped, disadvantaged, or limited English-speaking students.

In March 1979, OCR published a set of guidelines that brought together, and applied specifically to vocational education programs, a number of key provisions of the Nation's civil rights legislation. The vocational education guidelines require States to monitor their subrecipients of Federal funds for civil rights compliance and give Federal program offices a more active role in ensuring that civil rights obligations are met. It is too early to assess the effects of this strategy, but the guidelines seem a promising new means for securing civil rights compliance. After years of debate about whether or not the States are ready, willing, and able to assume a more active role in protecting civil rights, there is now a mechanism in place for assessing the merits of each side of the debate.

FOOTNOTES

1. U.S. Congress, Committee on Labor and Public Welfare, *Education Amendments of 1976: Report to Accompany S.2657*, Senate Report No. 94-882, 94th Cong., 2nd Sess., 1976, p. 57 (hereafter cited as Senate Report).

2. DHEW, Office for Civil Rights, "Vocational Education Programs Guidelines for Eliminating Discrimination and Denial of Services on the Basis of Race, Color, National Origin, Sex and Handicap," *Federal Register*, Vol. 44, March 21, 1979, 17162-17175 (hereafter cited as Vocational Education Guidelines).

3. Report, Commission on National Aid to Vocational Education, 1914, in *American Education and Vocationalism*, ed. Marvin Lazerson and Norton Grubb (New York: Teachers College Press, 1974), pp. 116-131, p. 124, and passim.

4. Advisory Committee on Education, Staff Study No. 8 (Washington, D.C., 1938), in Lazerson and Grubb, op. cit., pp. 148-158.

5. Panel of Consultants on Vocational Education, *Education for a Changing World of Work* (Washington, D.C.: Government Printing Office, 1963).

6. Senate Report, p. 54; Advisory Council on Vocational Education, *The Bridge Between Man and His Work*, 1968, in Lazerson and Grubb, op. cit., pp. 163-173, p. 172.

7. Senate Report, p. 54.

8. Senate Report pp. 57; 94; 76-77; 95-96. U.S. Congress, House, Committee on Education and Labor, *The Vocational Education and National Institute of Education Amendments of 1976: Report to Accompany H.R.12835*, House Report No. 94-1085, 94th Cong., 2nd Sess., 1976, pp. 21-25 and 14-15 (hereafter cited as House Report).

9. Senate Report, p. 54; and U.S. General Accounting Office, *What is the Role of Federal Assistance for Vocational Education?* Report of the Comptroller General to the Congress (Washington, D.C.: Government Printing Office, December 1974), pp. 44; 22-23 (hereafter cited as GAO Report).

10. Senate Report, p. 76.

11. House Report, p. 15.

12. Ibid., pp. 21-22.

13. Ibid., pp. 21-22, 24.

14. Ibid., p. 21.

15. Senate Report, p. 57.

16. "Matching Requirements for Additional Fund Use to Augment the $50,000 Mandatory Expenditure for Full-time Sex Equity Personnel and Related Functions," policy memorandum BOAE/DSVPO, FY 79-6, May 2, 1979.

17. Pursuant to Sec. 172(a) and (c), the Secretary is also authorized to offer leadership development awards to experienced vocational educators and fellowships to undergraduates who seek to become vocational educators. The technical review criteria for both the awards and the fellowships reflect sex equity considerations.

18. See previous discussion of GAO Report. See also Senate Report, p. 78, and House Report, p. 46.

19. Notice of Interpretation, Federal Register, Vol. 43, No. 59, March 27, 1978, p. 12757.

20. For a fuller discussion of the development of the excess cost regulations, see Michael Brustein, "Does the Federal Vocational Education Legal Framework Hinder the Delivery of Programs for Special Needs Populations?" in Career Development for Exceptional Individuals 4 (Summer 1981): 8-22.

21. Federal Register, Vol. 42, No. 67, April 7, 1977, p. 18549.

22. Federal Register, Vol. 42, No. 191, October 3, 1977, p. 53826. The shift in OE's interpretation seems to have been strongly influenced by a letter sent to the Commissioner on June 29, 1977, by Representatives Carl Perkins and Albert Quie and Senators Claiborne Pell and Jacob Javits. (See Brustein, op. cit., pp. 14-15.) The letter maintained that the full cost rule "would greatly reduce funds available for necessary special services for the handicapped and disadvantaged," and was therefore contrary to the intent of Congress when it promulgated the 50 percent matching requirement. The Congressmen further noted that this "approach carries the unfortunate implication that handicapped and disadvantaged persons do not have an equal right to receive the same level of support for vocational education as persons who do not need special help."

23. Notice of Interpretation, Federal Register, Vol. 43, No. 59, March 27, 1978, p. 12757; Catalog of Federal Domestic Assistance No. 13.499 Vocational Education-Special Needs, March 22, 1978. See also Federal Register, Vol. 42, No. 191, October 3, 1977, p. 53822.

24. The statute says and, while the regulations say or. OE explained that the change was designed to end the inconsistency between the regulations for funding this program and the rules for funding those VEA programs that require local applicants to be ranked on the basis of youth unemployment or school dropouts. Federal Register, Vol. 42, No. 191, October 3, 1977, p. 53822.

25. Vocational Education Data System (VEDS), 1979; Vernon L. Beuke et al., Implementation of the Education Amendments of 1976: A Study of State and Local Compliance and Evaluation Practices (Cambridge, Massachusetts: Abt Associates, Inc., December 1980), pp. 149-151 (hereafter cited as The Abt Report); David Long and Robert Silverstein, An Analysis of the Fiscal and Equity Provisions of the Vocational Education Act, draft (Washington, D.C.: Lawyers' Committee for Civil Rights under Law, September 1981), chapter on Sex Equity (hereafter cited as Long and Silverstein).

26. VEDS 1979; Long and Silverstein, chapter on Sex Equity; The Abt Report, pp. 154-156. See Chapter III for a further discussion of expenditures for this purpose.

27. VEDS 1979. Chapter III treats Subpart 2 expenditures in greater depth.

28. The Abt Report, pp. 156-159.

29. For a discussion of funds expenditures to promote sex equity at the district level, see Chapter III.

30. See Chapter III; The Abt Report, p. 160; and Long and Silverstein, chapter on Sex Equity. States are apparently also having difficulty interpreting the requirement that all RCU contracts for exemplary and innovative projects funded under Subpart 3 must "give priority to programs and projects designed to reduce sex stereotyping in vocational education" (Sec. 132(b) and 34 CFR at 104.706(b)(1). At issue is the meaning of "priority." In four States that were visited during the Long and Silverstein study, State vocational education officials indicated that they understood the intent of the provision but were unclear as to how to fulfill it. No State had any written policy on what it meant to "give priority," and one official admitted that the requirement was ignored. Clarifying this requirement should therefore help States to comply with it.

31. "Incentives to Reduce Sex Bias, Discrimination and Stereotyping," BOAE/DSVPO, FY 79-12, July 23, 1979; Long and Silverstein, chapter on Sex Equity.

32. Office for Civil Rights, U.S. Department of Education, 1979 Vocational Education Civil Rights Survey, December 1980. See also

Increasing Sex Equity, The Impact of the 1976 Vocational Education Amendments on Sex Equity in Vocational Education, Report of the National Advisory Council on Vocational Education and the National Advisory Council on Women's Educational Programs (Washington, D.C., December 1980); National Commission for Employment Policy, Increasing the Earnings of Disadvantaged Women (Washington, D.C., January 1981); American Institutes for Research, Vocational Education Equity Study (Palo Alto, California: April 1979), vols. I-IV; and Randall S. Brown, Marilyn Moon, and Barbara S. Zoloth, "Occupational Attainment and Segregation by Sex," Industrial and Labor Relations Review 33, no. 4 (July 1980): 506-517.

33. The Abt Report, pp. 185-7; Carol VanDeusen Lukas, "Special Needs Populations in Vocational Education," paper prepared under contract for the National Institute of Education Vocational Education Study, July 1981 (mimeographed). It should also be noted that under the Tydings amendment, States legally can, and routinely do, spend one year's allocation over a period of several years.

34. Federal Register, Vol. 45, No. 83, April 28, 1980, p. 28292. See also U.S. Congress, House, Report on Technical Amendments of 1979, House Report No. 338, 96th Cong., 1st Sess., 1979, p. 10; The Abt Report, pp. 189-92; Long and Silverstein, chapter on VEA Assistance for Special Needs Populations; and Brustein, op. cit., pp. 18-20.

35. The Abt Report, pp. 192-4. Long and Silverstein, chapter on VEA Assistance for Special Needs Populations.

36. Charles S. Benson and Gareth E. Hoachlander, The Distribution of Federal Funds Under the Vocational Education Act: Interstate and Intrastate Allocations, Substudy C (Berkeley, California: The University of California at Berkeley, March 1981). See also Chapter III.

37. The Abt Report, pp. 208-10. P.L. 94-142 is also likely to be stimulating the progress toward mainstreaming that administrators in these States report.

38. Jacques Nacson and Ella Mizzell Kelly, Vocational Education: Meeting the Needs of Special Populations (Washington, D.C.: A. L. Nellum and Associates, Inc., 1980).

39. It has been argued that from a legal point of view the regulations are internally inconsistent. See Long and Silverstein, chapter on VEA Assistance for Special Needs Populations.

40. See Long and Silverstein, chapter on VEA Assistance for Special Needs Populations; The Abt Report.

41. VEDS 1979, Tables F1, F6.

42. House Report, p. 35.

43. The Abt Report, pp. 198-204; Nacson and Kelly, op. cit.; Long and Silverstein, chapter on VEA Assistance for Special Needs Populations.

44. Vocational Education Guidelines.

45. Ibid., p. 17165.

46. Ibid., p. 17163.

47. Ibid., pp. 17163-4.

48. At the time the guidelines were issued, the regulations for Title IX and Section 504 did not require State agencies to submit an MOA for assuring that recipients and subrecipients of Federal aid complied with these regulations in operating federally-funded programs, although they were, of course, responsible for compliance. The Department intended to issue a Notice of Proposed Rulemaking to make the regulations for Title IX and Section 504 consistent with Title VI, which would also eliminate any question about whether States were legally responsible for covering Title IX and Section 504 in the MOAs required by the vocational education guidelines. The rules have still not been issued. However, only one State refused initially to cover all of these civil rights laws in its MOA.

49. See, for example, Long and Silverstein, chapter on Compliance with Civil Rights Laws.

CHAPTER IX. REALIZING FEDERAL POLICY GOALS: ISSUES AND MECHANISMS

Introduction

The charge to the National Institute of Education to undertake a study of vocational education calls for "an examination of how to achieve compliance with, and enforcement of, the provisions of applicable laws of the United States." This is understandable, for the successive amendments to the Vocational Education Act of 1963 represent efforts to find the means for realizing more fully the goals of Federal policy. Issues of compliance by the recipients of Federal funds with both the spirit and letter of the "applicable laws" of the United States, which constitute a central theme in the history of the VEA, became more complex after the mid-1960s. In large part this was a result of the adoption of other legislation with provisions intersecting with those of the VEA. The other "applicable" laws dealing with civil rights and equality of opportunity in education are treated in Chapter VIII, and intersections between Federal vocational education and employment and training policies are discussed in Chapter V.

The concern of the Congress with assuring compliance reflected a sense of frustration that had been growing since it appeared that the goals of Federal policy enunciated in the VEA of 1963 were not being fulfilled. The Amendments of 1968 had sought to achieve the goals through new provisions placing expanded and stricter requirements upon the States. Before the next major reauthorization, however, studies and reports, testimony at Congressional hearings, and site visits to States by the staffs of Congressional committees showed that failures to comply with the intent and letter of the law were widespread and serious. These were documented in the 1974 report by the General Accounting Office, What is the Role of Federal Assistance to Vocational Education?, which a then staff member for the Senate Committee on

Education and Welfare recalls as having had an "explosive" effect.[1] Members of the Congress heard and read that the vocational education enterprise was failing to meet either the economic or social goals of Federal policy; that VEA dollars were not providing support for new programs; that course offerings were not responding to changing manpower needs; that Federal funds were not always going to areas with the greatest needs but were frequently being distributed on a flat formula basis; and that these failures were in large part the result of faulty implementation by States, localities, and the Federal Government.

One member of the Congress felt "that we are back in 1968 . . . that many of the ills we sought to cure by the 1968 Act have not been cured."[2] Congress' perception of the situation was, in short, that the existing legislation had not served to realize Federal goals; that the vocational education enterprise had not been an effective partner in implementing Federal policy and had even been resistant to change; and Federal monitoring and oversight were sorely inadequate--"slovenly and irresponsible" in the eyes of the House Committee on Education and Labor.[3] In effect, this meant that the Congress approached the task of reauthorizing the VEA with a conviction that key provisions of the legislation would have to be revised in order to achieve compliance with its broad goals and more particular objectives.

Key Provisions for Realizing Federal Purposes

The broad economic and social purposes of Federal vocational education policy and the changes in the means for realizing them adopted in 1976 have been discussed in earlier chapters. Information has also been presented on the behavior of State and local education agencies in response to key revisions in the legislation designed to bring about compliance with the intentions of Federal policy. These key revisions dealt with (1) improving planning for the use of all resources for vocational training and retraining; (2) distributing funds to areas lacking the resources to meet the needs for vocational education; (3) setting aside funds to provide programs and services to populations with special needs; and (4) providing resources that would encourage change in and improvement of the vocational education enterprise. A somewhat fuller examination of the considerations that led to placing reliance upon these four mechanisms, and of the ways in which they have worked, is now in order.

Improving Planning

The planning process was supposed to be critical for determining how the Federal grants, designed to assist the States, were to be used in conjunction with all other resources. It had, however, been characterized as neither open to interested parties and the public at large, nor informed with labor market data. The result was State planning documents produced for "compliance" which were critized as being "useful to no one, in most cases."[4] There was also evidence that State plans were not being seriously assessed. One investigation into the way the Office of Education handled the State plans indicated "that the Commissioner of Education had accepted State plans that no one at the Federal level had ever read in their entirety."[5]

In drafting new legislation, both Houses of the Congress sought to correct the deficiencies in planning but adopted different remedies. The Senate aimed at bringing about comprehensive and joint planning among the various agencies and institutions involved in vocational education and occupational training in order to reduce duplication and overlap among programs. The House emphasized the use of labor market demand and supply information and of data on the employment of vocational education students. The Senate's concern with comprehensive planning led to the requirement for a State plan prepared by a body consisting of representatives of 10 different agencies, organizations, or groups which met a specified number of times a year. The House's concern with the role of occupational and employment data in planning led to provisions for new evaluation requirements (already discussed in Chapter IV) and the creation of a National Occupational Information Coordinating Committee (NOICC) and parallel State Committees (SOICCs). The Senate solution was, in effect, negotiation and bargaining among parties with different interests; the House solution was rational decisionmaking made possible by the availability and required use of pertinent reliable information. Both solutions were adopted in the 1976 amendments.

Has the 1976 legislation brought about the improved planning that is an objective of Federal policy? By 1980, the representative State planning bodies were in operation, public hearings were being conducted, the NOICC and SOICCs had been established, and student placement data were generally available. The States were complying with the procedural requirements of the statutory provisions. But whether this meant that the desired kind of systematic planning of vocational education programs had been generally achieved is another question. Were States in fact carrying out planning based upon adequate knowledge of all resources for training and retraining, that would minimize overlap and duplication and assure a close fit between program offerings and labor market demands?

The answer, as might be expected, is a mixed one. States report that they are becoming more sophisticated in the use of planning methods and that more useful operational planning is taking place but not necessarily as a direct result of Federal requirements. Field studies in 15 States indicated that better occupational and labor market data were available, but that they were not necessarily being used in local decisionmaking on programs. The emphases on the importance of coordinating with other structures of Federal policy, such as employment and training, and of assuring that vocational education programs are relevant to labor market conditions assigned these objectives greater prominence in the thinking of State and even local vocational education administrators. At the same time, State officials were still reporting in 1980 that the State plans were being produced for compliance purposes and that the preparation and the planning of programs in many States were two different things.

It is important to remember that the planning requirements are aimed at the States, through which the decisions of local education agencies and individual institutions are supposed to be influenced. But control over planning does not mean control over local decisions. Decisions on program offerings or the recruitment of women or minority group members in nontraditional fields of study, for example, are made at the local, and not the State, level. Federal law alone cannot influence all the actions and decisions involved in attaining Federal goals. State influence over local planning is not constrained only by the tradition and practice of local autonomy, but also by requirements for the distribution of funds, which make funding decisions independent of planning. These several considerations do not mean that the States are unable to influence local decisions or to improve planning. They do suggest, however, that the provisions of the existing legislation establish at best necessary, but not sufficient, conditions for effective State planning.

Providing Funds to Areas Lacking Resources

The 1976 legislation, as has been seen, attempted to deal with the problem that Federal funds were not flowing to "those school districts and agencies most in need of those resources to provide programs."[6] The Senate solution to this problem was to establish requirements for the approval of applications that instructed the States to give priority to depressed areas with high unemployment and insufficient resources and also to applications proposing new programs designed to meet new and emerging manpower needs and job opportunities.[7] The House solution for ensuring greater targeting and equalization of VEA funds was to designate the most important factors for determining their intrastate distribution: relative financial ability and the number and concentration of low income families (for LEAs) and the number and concentration of higher cost students (for other eligible recipients). States would be allowed to use other "economic, socioeconomic or demographic factors," as long as those designated were weighted as "most important."

The funds distribution provision finally adopted combined both the House and Senate requirements, which were seen by the Conference Committee as proposing "similar changes."[8] Here again, as with the planning provisions, the two Houses proposed different solutions to what had been identified as the same problems. The assumption was that the several designated factors, with the exception of "new programs," would be mutually reinforcing. Instead, the combination of the two different solutions, without clarification of how they were to be used, created confusing and ambiguous provisions leading to major problems with implementation and compliance.[9]

Has the mechanism adopted to assure the targeting of Federal funds worked as was intended? The answer to this question has already been set forth in Chapter II: there has been some targeting of Federal funds towards LEAs with low relative financial ability, high unemployment, and high concentrations of low income families. But the targeting has been haphazard, and the extent of targeting varies greatly from State to State.

Is this overall result to be attributed to failures on the part of the States to comply with the individual requirements of the Act as they have been interpreted by Federal administrators? It is not. All States studied by the NIE were distributing funds according to formulas approved, and in some cases created, by Federal administrators. Nor were the Federal monitors of the State plans lax. In fiscal year 1979, they spent more than 5,000 person-days on reviewing State plans alone and additional time monitoring for compliance and providing technical assistance to States. Federal officials did not hesitate to turn back a plan and hold up funding until deficiencies were corrected. Every State had its plan returned on the ground that the formula was faulty at least once during fiscal years 1979 and 1980.

The reasons why Federal funds are effectively targeted in some but not all States are several and somewhat complicated. To begin with, the formula factors, as they are now defined and measured, are not always mutually reinforcing, and may even operate to counter one another's targeting effect. A more important reason, for a majority of the States, lies in ambiguities in the law itself, sometimes compounded by interpretation by Federal administrators, which operate to confuse the distribution process. Problems arise from the statute's failure to indicate how the two application approval factors and the two funds distribution factors are to operate together without undercutting the intended effects of each, how the factors are to be defined and measured, how much weight each is to be given, or how the raw data used to measure them are to be converted into variables for the formulas. These ambiguities were not effectively resolved by Federal administrators, who tended to be preoccupied with State compliance with the minutiae of the requirements and who lacked the technical expertness to devise clarifying interpretations.

Because the factors are not mutually reinforcing, and in a few instances may counterbalance one another, and because States have the discretion to add factors in the formulas and assign weights to all factors, the States can produce almost any distribution of Federal funds they wish without being out of compliance.

A study of the legal framework and its implementation in four States conducted for the NIE made clear the problems arising from the directions given on how applications requesting specific amounts of funding for specific projects are to be combined with a formula which distributes funds according to a recipient's financial ability. Neither the statute nor subsequent interpretation fully recognized the differences between a project approach and an entitlement approach to distributing funds. (An entitlement approach uses formulas to determine how much each recipient will receive, with poor districts receiving more than wealthy ones. Under a project approach, an applicant requests funding for a particular project or set of activities.) The funding factors in the Act are used to rank the applicants, but not to determine how much each is to receive. The two approaches yield different distributions and further different objectives. The entitlement approach is appropriate when the objective is to target funds so as to compensate for lack of resources in districts. It serves an equalization function. The project approach is appropriate when the objective is to achieve particular programmatic objectives, such as installing new programs. The Act depends upon a single distribution procedure to advance both kinds of objectives, when different processes may be necessary.

Problems first surfaced with deciding on how application approval factors were to be combined with funds distribution factors. None of the four States in the legal framework study adopted separate procedures appropriate to each set of factors. Each State, either with the approval or at the insistence of Federal officials, combined all four in a single funding formula, even though they found it difficult to convert application approval factors--one of which is difficult to quantify and the other not recipient-specific--to variables in a formula. Combining the two kinds of factors in the same formula could tend to distort the targeting intended by Congress.

Additional ambiguity in the statute is found in the definitions of and measures for key terms. The statute does not define "economically depressed areas," "new programs," or "give priority," all of which represent notions that the States are required to use in distributing Federal funds. The term "economically depressed areas" may be defined in different ways, and Federal administrators have not prescribed a single definition to be used. Some States have adopted the Department of Commerce definition; but as it results in classifying most areas of the United States as economically depressed, it is of dubious value in distinguishing among depressed areas. The term "new programs" is a sieve rather than a container. It covers programs absolutely new to the recipient's service area; programs new to a school in the recipient's area; an old program with a new curriculum; and existing programs expanded with new facilities, equipment, and supplies, according to a definition provided by Federal administrators. In the absence of a formal definition of the term "give priority," States have adopted "prioritizing" techniques which range from making all applicants meet these different criteria to assigning the priority considerations a role only on paper.

Even a clear definition may be nullified by the measure selected for a given factor. For example, one of the funds distribution factors, relative financial ability, is defined in the legislative history and regulations to be assessed property value per capita. Such measures of wealth are generally available on a county rather than a school district level. If strict compliance with the statute is required and the county level data are used, financial differences between neighboring districts will be masked. However, a slightly different measure, property wealth per student, is generally available on a school district level. Federal interpretations have fluctuated between requiring compliance with the legislative requirement and permitting States to use the per pupil measure.

Neither the statute nor Federal interpretation has resolved how much weight each statutory factor is to receive. The effect that each statutory factor has on the final distribution depends, of course, upon the weight assigned to it in the formula devised by a State. One State, which included all four factors in the formula, assigned such negligible weights to the two application approval factors as to eliminate their effects. The addition of other factors, as has been said, may serve to cancel the effects of a statutory factor. In one industrial State, adding the reasonable factor, "manpower needs--estimated number of job opportunities," tended to negate the effects of the "unemployment rates" factor.

The statute and Federal guidelines offer no instruction on how data are to be converted into variables used in formulas. This is important because States can reduce the equalization and targeting effects by converting raw numbers which demonstrate substantial disparities into variables which minimize the differences. In calculating the points given to relative financial ability in the formula, some States use a method which assigns the same point value to a large group of recipients with widely different indicators of relative financial ability. This results in reducing the difference between the amount of funds going to districts with widely different needs.

It was early observed that there are no statutory standards for judging whether the intended equalization and targeting effects are achieved. Such standards have not been supplied by Federal administrators, who apparently did not have the technical knowledge to develop them when the legislation was first being implemented. Moreover, in reviewing a State's proposed distribution formula and measures, they were attentive to the letter of the requirements rather than to the question of whether the anticipated equalization and targeting objectives were likely to be achieved. True, they have required the States to show by examples the effect of the distribution on rich and poor districts, but this permitted States to select districts which exhibit the sought-for effects. Federal administrators also focused on whether a State's "economically deprived area" measure included both a composite and an unemployment measure, and even required several States to change their formulas to accommodate the statutory language. Yet, in the case of one State they failed to detect the fact that State vocational education funds were being distributed in such a manner as to counter the equalizing and targeting effects of the funds distribution factors.[10]

Nonsupplanting and Maintenance. A critical aspect of the targeting of Federal funds is ensuring that they are used to supplement State and local funds; otherwise State funds can be distributed so as to offset the effects of Federal targeting. In applying for a grant-in-aid, a State must provide assurances that VEA funds

> will be so used as to supplement, and to the extent practicable, increase the amount of State and local funds that would in the absence of such Federal funds be made available for the uses specified in the Act, and in no case supplant such State or local funds . . . (Sec. 106(a)(6)).

The regulations quote but do not further elucidate the statute, and Federal officials, in response to requests for clarification, have stated that this provision is designed to assure that the aggregate of State and local funds available for the purposes of the VEA cannot be reduced because of the receipt of Federal funds.

The prohibition against supplanting applies at both the State and local levels: neither States nor local districts may reduce their funds because of Federal monies. Supplanting at the State level would occur, for example, if a State were to take Vocational Education Act funds into account and reduce an eligible recipient's amount of State funds according to the amount of Federal funds received, thus erasing the effect of Federal funds. It is possible to test for and detect State-level supplanting, and Federal officials have done so. In one instance, a bill introduced in a State legislature that would have reduced the State contribution to a community college by the amount of Federal funds it received was held to be in violation of the "no supplant" principle.

At the local level, supplanting is virtually impossible to detect. It is extremely difficult to learn what would happen in the absence of Federal funds in situations in which programs are continuously undergoing change, non-Federal funds provide the major share of resources, and Federal funds are being used for the same purposes as State and local funds.[10] Moreover, the emphasis on using Federal funds for new programs raises the additional problem of determining whether a previously nonexistent program would have been funded without Federal aid.

Funds for Programs and Services for Special Needs Populations

Both the House and Senate Committees reacted strongly during reauthorization deliberations to evidence showing that students with special needs were not being served as intended, and that State and local expenditures for this purpose were low and in some States actually declining.[11] It was clear that programs for disadvantaged and handicapped students were primarily federally funded programs, and the House Committee was persuaded that additional Federal funds would be needed to increase the numbers of handicapped and disadvantaged enrolled in vocational education programs.

The mechanisms relied upon in the 1976 amendments to achieve this objective have been treated in Chapters I, III and VIII: a 20-percent set aside of Federal funds for disadvantaged persons (increased from 15 percent), also covering limited English-proficient students, and a

10-percent set aside for handicapped students, both to be matched dollar-for-dollar with State and local funds. The regulations added the requirement that Federal and matching funds be applied to excess costs only.

The VEA's provisions for meeting the needs of specified groups have been discussed in detail in the preceding chapter, together with the associated implications of other pertinent Federal legislation. That chapter points out that the interpretation of the excess cost requirement which allows the full costs of separate programs to be considered excess costs may not promote the mainstreaming of handicapped and disadvantaged students as the law intends. It also reports that a majority of the LEAs surveyed which had handicapped and disadvantaged students enrolled in vocational education programs are either unable to keep track of excess costs or do not find it worth their while to do so. It notes that less than one-half of those districts reported using Federal funds to provide the extra services for these students. The evidence suggests that these findings may be attributed only in small part to failures to comply strictly with Federal requirements. Thus, it is clear that the Federal objectives of providing programs and services for special needs students and of mainstreaming them to the fullest possible extent are imperfectly advanced by the excess cost requirement.

More important reasons for the limited realization of these equity objectives were the set-aside requirements themselves. They embody three distinct elements: they reserve a portion of Federal money for a specific purpose; they restrict the use of the money to meet excess costs only; and they further limit the use of Federal funds to cover only half of the excess costs. The conclusion reached in Chapter VIII is worth repeating here because it is a judgment on a key mechanism of the VEA: namely, that reserving funds for special populations through set asides is probably an effective way of carrying out the Federal objective of providing equal opportunity. State directors of vocational education have expressed the view that States would not be spending funds at the current level for the disadvantaged and handicapped were it not for the set-aside provisions. The idea of earmarking funds does not in itself create problems, as the experience with the earmarked Subpart 4 funds for Special Programs for the Disadvantaged indicates.

The problems arise from the requirements that Federal funds be used solely for excess costs and that they be matched. As has been pointed out, districts are not accustomed to doing the detailed accounting required to document excess costs in accordance with standards developed by the Federal administrators, and the amount of Federal funds received by most LEAs is viewed as too small to justify establishing those accounting procedures. Thus, they run a risk of audit exceptions if they receive funds. Some States and LEAs would rather not run the risk and do not provide the programs and services with Federal funds. The second problem lies in the necessity for a State or LEA to find matching funds. The Act makes clear that either the State or the local agency may supply the match. In point of fact, many States pass the responsibility for supplying the match to the LEAs, in which case the poorest LEAs are often least able to afford the set asides. The Technical Amendments of 1979 (P.L. 96-46) sought to reduce the severity of this problem by increasing the Federal share of the excess costs. Regulations implementing this legislative change had not been issued up to September 1981, and States and localities have not yet taken advantage of the relief it offers. The matching dollars, then, still must come from new money or rearrangement of existing State and local funds. The States and localities have been unable or unwilling to rearrange funds to take dollars from existing programs and use them to match Federal funds earmarked for special needs populations.

Resources for Change and Improvement

As has been seen, the Declaration of Purpose of the VEA of 1963, as amended, declares that Federal grants are designed to assist the States in extending, improving, and developing new vocational education programs. The legislation not only encourages the pursuit of these ends, but also prescribes mechanisms for achieving them. Thus, it requires that priority be given to applicants proposing new programs. It also provides that 20 percent of the joint allotment for Subparts 2 and 3 is to be used for authorized activities under Subpart 3, Program Improvement and Supportive Services. It is important to bear in mind the distinction frequently made in preceding chapters between what the States *may do* with the Federal funds allotted to them and what they are *directed to do*. The authorized uses of Federal funds are indications of Federal preferences. The uses that are mandated clearly serve priority purposes. Apart from the set-aside provisions, Subpart 2, as has been seen in Chapter I, sets forth 15 activities for which Federal funds *may* be used. Subpart 3 lists six authorized uses of funds, with expenditures required on only one, guidance and counseling.

The States have used the discretion they enjoy to spend almost 91 percent of their basic grants for either the general support of vocational programs or for State and local administration. Uses authorized primarily to induce change, such as sex equity activities, energy programs, and placement services, together accounted for only 1.3 percent of all expenditures of Federal funds. However, national figures mask an important fact; namely, that only a few States are responsible for most such expenditures, as Chapter III makes clear. The same finding holds for Subpart 3 activities: the States vary greatly in their expenditures on them, and only a small number are responsible for most such expenditures.

This pattern does not mean that States are not complying with the legal requirements. They are spending the required amounts on the mandated uses, and they exercise the legally granted discretion they have to use Federal funds for program and administrative purposes. Moreover, some of the money reported as being spent on "vocational education programs" may support change and improvement in the programs, but this cannot be learned from the way States keep accounts. Thus, States are in compliance with the Act even though they use Federal funds to serve their purposes and goals, which may or may not be congruent those of Federal policy.

In any case, it is clear that Federal money may readily and in compliance with the Act serve State purposes and goals. Federal purposes which are not shared by States and localities are not likely to attract State and local dollars. Under conditions of financial austerity, when program maintenance becomes a primary concern, States are far less likely to use Federal funds for special needs students or to mount new programs, for example--in short, for objectives central to Federal policy. Historically, Federal objectives in education have centered on ends that were not at the forefront of concern in most States as, for example, in the recent case of overcoming sex bias and sex stereotyping and earlier with research and curriculum development. It is not surprising that under permissive legislation States do not automatically use Federal funds to realize Federal objectives which they may not share.

There is no reason to assume that Federal and State and local objectives are necessarily at odds with respect to encouraging change and improvement in vocational education. But it is worth remembering that since 1963, Federal policy has sought to redirect and reform the vocational education enterprises and that it has done so in part by establishing objectives which were either not highly valued or even ignored by the States. The agenda of policy concerns represented by Federal legislation tends over time to become institutionalized in State behavior. Central in this development is the way in which

Federal legislation is implemented and administered. In the instance of the 1976 amendments, the administration and oversight of the new legislation has had far-reaching implications for compliance by the States and localities.

Federal Administration and Oversight

The Congress was aware of the complexity of the new legislation and therefore delayed the date of its implementation for 1 year, so that Federal officials would have time to issue regulations and States would have time to prepare for meeting the new requirements. The intention was to protect the States from having to make hasty decisions in putting the required changes in place.[12] This ideal scenario was not followed. The regulations were issued late, and the States had to act without knowing fully what would be required of them.

The Education Amendments of 1976 were enacted on October 12, 1976. The major provisions of the Act were to take effect on October 1, 1977. The first State plans were due on July 1, 1977--these were to be the 5-year plan covering fiscal years 1978-82 and the annual plan for the first year, fiscal year 1978. However, the final rules and regulations were not issued in final form until October 3, 1977, 3 days after the provisions of the Act were to take effect and three months after the submission date for the State plans. Consequently, the first State plans were written primarily on the basis of the legislation and, to a lesser extent, on the basis of the proposed regulations issued in April 1977. Since critical aspects of the statute were ambiguous, the States could initially only make informed guesses about what would be required of them. To reduce the persisting confusion and frustration, Federal administrators issued policy memoranda to provide clarification and guidance where needed. Fifteen policy memoranda were issued during fiscal year 1979 and another five in fiscal year 1980. When it was concluded that too many requirements were being promulgated through such documents, Federal administrators decided that guidance was to be given when absolutely necessary only through formal regulations.

The mode of Federal implementation contributed to unsatisfactory implementation at the State level, particularly with respect to the distribution of Federal funds. The statute, it has been emphasized, required interpretation, but the guidance provided by Federal administrators sometimes made matters worse, and was not always consistent. The regulations of October 3, 1977, did little more than repeat the statutory provisions on distributing funds. In response to State inquiries and complaints, a discussion document was circulated in the spring of 1979. This was followed by successive drafts of a manual on the distribution of funds. By September 1981, after undergoing four revisions in the course of which policy positions were altered, the manual had not yet been issued in final form. The problems thus created for reviewing State plans and monitoring compliance were numerous and irritating. There were instances of distribution formulas being approved in an early review only to be disapproved in a later one and of the same practice being approved by one Federal official only to be questioned by another.

The experience of one State illustrates the frustration caused by policy uncertainities and reinterpretations. Initially, this State sought to use a distribution formula for the 1977-78 school year identical with one approved for another State. It was, however, disapproved by the Department (then Health, Education, and Welfare), and a second formula was proposed and accepted. This formula lacked a "new program" factor, but it continued to be approved in 3 successive years. Then the State was informed that the formula for fiscal year 1981 must include a "new program" factor. The State preferred to use a funding pool for new programs, a device which was generally permitted, but not in this instance. A fiscal year 1980 Monitoring Evaluation Review for Compliance/Quality (MERC/Q) indicated that the State's formula would be in compliance if a "new program" factor were included. The State complied, and with Federal technical assistance designed a "new program" variable with negligible weighting for the formula. After 1 year, Federal administrators requested that the State eliminate the factor in the formula for fiscal year 1982.

The experience of this State also serves to illustrate the problems arising from the ambiguity of key terms and from questions of measurement. In this case, the term is "relative financial ability," for which the State used a local property measure in its formula for fiscal year 1978. The next year, the State, having adopted a school finance reform law, requested permission to use a more accurate measure of "relative financial ability." Federal officials, apparently not understanding the merits of the change proposed, denied the request. Later, however, there was a change of mind and the State was permitted to use its preferred measure in the formula for fiscal year 1981. Since then Federal administrators have reconsidered the question and have suggested that it would be better if the State readopted its original property measure for "relative financial ability."

Interpretation of the statute, combined with technical assistance, is one dimension of Federal administration. A second and related dimension is the Federal Government's ability to oversee and monitor the States with respect to those decisions and actions that are both required and encouraged as a result of their receipt of Federal grants.

Federal officials, sensitive to the sharp criticisms of administrative failures made during the reauthorization hearings, drew up detailed checklists of all requirements of the 1976 legislation to be used in reviewing State plans. In addition, they prepared detailed guides for monitoring State compliance through the process, already mentioned, known as Monitoring Evaluation Review for Compliance/

Quality. The MERC/Q process is a consequence of the charge given originally to BOAE, and subsequently carried out by OVAE, to "conduct a review analyzing the strengths and weaknesses of the programs assisted with" VEA funds (Sec. 112(a)(2)).[13]

The checklists are exhaustive and the MERC/Q site visits to the States result in voluminous documents. The hours spent by Federal administrators on monitoring are considerable, and Federal administrators have not been reluctant to find a State plan out of compliance. Yet the available evidence, derived from State case studies and examinations of Federal documents and agency files, points to the conclusion that the responsible Federal agencies have been concerned chiefly with securing technical compliance with particular requirements rather than with the overall results of State decisions and actions in relation to the broad intent--the spirit--of Federal policy. As one State Director said: "OVAE was so concerned with the minutiae that it missed the big picture. We changed certain provisions in order to come into technical compliance without changing the effect."[14] This is reminiscent of the observation made in the 1976 House Report that Federal administrators were "demanding a great deal of paperwork and detailed data from the States and local school districts but then there is no follow-up to determine whether States are complying with the law and no efforts are being made to assist the States in operating their programs better."[15]

Incentives and Enforcement Mechanisms

Legislation such as the VEA depends upon incentives and enforcement mechanisms to bring about preferred behaviors on the part of States and localities. An "incentive" is something of value offered to induce desired behavior. In this sense, the Vocational Education Act as a whole constitutes an incentive, in that it offers funds to States in exchange for commitments to engage in certain actions.

Enforcement mechanisms are the oversight and monitoring procedures, including formal audits, and the sanctions, or penalties, associated with failures by the recipients of Federal funds to carry out their obligations under all applicable laws.

Incentives. Implicit in the notion of the Federal grant as an incentive is freedom of choice. States, LEAs, and other eligible recipients are not compelled to engage in the desired behaviors specified in the law and regulations unless they accept the Federal funds. At the State level the incentive has worked in the sense that no State has yet refused funds and all States, consequently, have met the requirements set forth in the legislation. This is not universally the case at the local level. For several reasons some LEAs do not apply for Federal funds, and some return funds to avoid Federal requirements. A survey of secondary and postsecondary LEAs showed that 20 percent of the respondents did not receive Federal funds.[16] Of these the vast majority cited the burden of regulations in light of the small size of the grant as the main reason for not applying.[17] The incentives clearly operate differently at the State and local levels. How much of an incentive Federal funds are at the local level depends upon how the States distribute the funds. For example, some States distribute all their Federal funds according to an approved formula to the LEAs. Thus, each LEA receives a lump sum which it subdivides into portions for Consumer & Homemaking, Special Programs for the Disadvantaged, Basic Grant, and set asides from the Basic Grant. In these States, the grant to which a LEA is entitled, if it chooses to apply, may be relatively substantial because a LEA must apply for funds under all subparts. These States report that most LEAs do apply for the funds because the total grant is too large to forego.

In other States, the Federal funds are divided into their component parts at the State level, and LEAs apply for one or more particular part. States may divide the Basic Grant further into duction in the level of resources available to serve these students.[22]

Since the final regulations were not issued until 3 days after the start of fiscal year 1978 and 3 months after the States had submitted their plans, the States were not required to abide by the excess costs rule until fiscal year 1979. The regulations were clarified on March 27, 1978, after a number of State and local education agencies expressed uncertainty about whether or not the excess costs rule applied both to regular vocational education programs in which students with special needs were mainstreamed and to separate programs. The response would prove consequential: in a regular, or mainstream, program, excess costs are the costs of the extra or supplemental services that a student with special needs receives, over and above the services being received by the whole class, including the extra support that is provided to the instructor. In contrast, if a handicapped or disadvantaged or limited English-speaking student is placed in a separate program, VEA and matching State and local funds can be used for the full cost of operating such a program. The States, however, must make sure that their average statewide expenditure (the sum of State and local expenditures) per special needs student equals or exceeds the average per student expenditure for other students.[23]

Both of these interpretations seek to ensure that the States devote the same level of resources to students with special needs as they do to other students, and that they use VEA and matching State and local funds to provide the additional services these students need to participate in vocational education. However, by making it both administratively and financially more attractive to support separate programs, the regulations implicitly discourage mainstreaming, contrary to the intent of the law. Whether or not they do so in practice will be taken up in the implementation section of this discussion.

At the Federal level, the primary means for ensuring State level compliance are (1) the review of the General Application and the 5-year and annual State plan; (2) monitoring of States in combination with technical assistance; and (3) fiscal audit. These means are used at three stages in the grant cycle: before the award of the grant-in-aid, during implementation of the State plan, and after the termination of the funding period. In the first review, the legislation requires that the Secretary of Education (formerly the Commissioner of Education) "shall within four months of the receipt of a State's annual program plan and accountability report transmit to the State board an analysis of such plan and report, including suggestions for improvements in the State's programs . . ." (Sec. 112(a)(1)). During the implementation the statute then provides for Federal assessment of "the strengths and weaknesses of the programs assisted with funds available under the Act" in at least 10 States every fiscal year during the implementation stage. After the close of the funding period, fiscal audits must be conducted of programs in the same State.

State oversight of local behavior is an important dimension of compliance for it is the LEAs and other eligible recipients which are responsible for providing vocational education programs and services. They make decisions which either implement or fail to implement Federal priorities. The States oversee and monitor local activities through reviews of local applications and evaluations and reviews of local projects.[18] The requirements for review of local applications, set forth in the statute, call for State assurances that funds will be distributed to eligible recipients on the basis of annual applications which--

> (A) have been developed in consultation (i) with the representatives of the educational and training resources available in the area to be served by the applicant and (ii) with the local advisory council required to be established by the Act to assist such recipients,

(B)(i) describe the vocational education needs of potential students in the area or community served by the applicant and indicate how, and to what extent, the program proposed in the application will meet such needs, and (ii) describe how the findings of any evaluations of programs operated by such applicant during previous years, including those required by this Act, have been used to develop the program proposed in the application,

(C) describe how the activities proposed in the application relate to manpower programs conducted in the area by a prime sponsor established under the Comprehensive Employment and Training Act of 1973, if any, to assure a coordinated approach to meeting the vocational education and training needs of the area or community, and

(D) describe the relationship between vocational education programs proposed to be conducted with funds under this Act and other programs in the area or community which are supported by State and local funds . . . (Sec. 106(a)(4).

These detailed requirements would, if met, provide a basis for informed review at the State level, for they ask for comprehensive plans identifying objectives which would determine expenditure patterns. In most cases, however, the local applications do not contain the information sought. The nature and extent of information requested and supplied varies from State to State. In many States it is impossible to determine how a local recipient plans to use the Federal funds or how it will distribute funds among schools and target funds on specific students. A review of local applications in 14 States revealed that:

1. Only one State required the applicant to describe how the representatives of education and training agencies in the area served had been involved. (Four did not require any assurance to this effect from LEAs.)

2. Thirteen States required an assurance that advisory council members had been involved in preparing the local application. However, only a few States required that the application describe how the local advisory council on vocational education had been involved.

3. Eleven States required the applicant to give assurance that the results of evaluations had been used to develop the proposed programs, but only four States required the applicant to describe how this was done.

4. Only one and four States, respectively, required the applicant to describe, first, how the proposed programs related to area CETA programs; and, second, the relationship between federally and State- or locally sponsored programs.

5. Only six States required the local applicant to describe the needs of students to be served. Most States, however, collected data on student enrollments and courses offered.

6. While most States required that programs supported with VEA funds be related to realistic employment opportunities, only one State required the applicant to describe the local economic and employment situation. Many States, however, required the LEA to collect and analyze these data through a variety of methods including employer surveys and labor market projections available from the United States Employment Service and local employer contacts.[19]

It is reasonable to conclude that if the States assigned a greater value to local compliance, they could be more demanding and rigorous in their review of local applications, instead of relying as heavily as they have upon technical assistance and other noncoercive means to persuade eligible recipients to move in the desired direction. If this were done, however, it is possible that applicants which lack adequate educational resources would suffer most, because they might not have the technical staff capabilities to prepare satisfactory applications.

Sanctions

Sanctions may be invoked at each stage of the granting cycle--before the award, during implementation, and after funding--for failure to meet conditions of the statute and the regulations. The applicable sanctions are set out in the Vocational Education Act and in the General Education Provisions Act (GEPA). They take the following forms: (1) disapproving State plans and reports; (2) withholding funds and suspending payment of Federal funds for failure to use them properly; (3) cease-and-desist orders; and (4) repayment of misspent funds.

If a State refuses to assure minimum conditions in its Plan submitted before the award, the Secretary may disapprove it and not distribute funds to that State. Before this step was taken, the State would be given an opportunity to amend the Plan, and such a give and take between the Federal Government and the State routinely takes place during the Plan review. Disapproval, as opposed to non-approval, occurs only if a State refuses to amend the Plan. Some States have had their plans held up for several months, but approval was ultimately granted. Because students, the presumed beneficiaries of Federal assistance, would be injured as a result and because the action would invite political costs, the sanction of denying funds is a difficult one to apply.

If, after the Plan is approved, its monitoring shows that States are not acting in accordance with their commitments, Federal officials may withhold funds in whole or in part, or issue a cease-and-desist order. Authority for withholding funds in part and for issuing a cease-and-desist order are found in GEPA. The Vocational Education Act contains authority only for withholding funds in full.

The Federal Government has the authority to conduct fiscal audits in order to recoup misspent funds under the Vocational Education Act, Sec. 112(a)(2) and GEPA, Sec. 452, respectively. Section 456 of GEPA also allows the Federal Government to repay 75 percent of recouped funds to the States, to be used in accordance with the provisions of the Act the following year. The VEA and GEPA together give Federal officials a set of sanctions that they can invoke, if they choose, to make the "punishment fit the crime." An additional mechanism could be fashioned by having provisions similar to those authorized in Title I of the Elementary and Secondary Education Act when it was amended in

1978. They would authorize the Secretary to publish notice of an intention to withhold funds and enter into "compliance agreement" with a State instead of withholding. Under such an agreement, a State would admit it was not in compliance and set forth the steps it would take to bring it into compliance within a prescribed time period. If the compliance problems involve misuse of funds, the Federal administrators may withhold only the amount misspent under the GEPA. If the compliance problem lies in an improperly constituted State Advisory Council, or failure to appoint a sex equity coordinator, the Education Appeals Board, in response to a request by OVAE, may issue a cease-and-desist order. Up to September 1981, no State has been denied a grant-in-aid, although the threat to withhold funds has been made, and no cease-and-desist order has been secured from the Education Appeals Board. There are, in short, powerful sanctions which have not been applied.

By contrast, powerful sanctions with respect to eligible recipients are not available to the States. The Vocational Education Act offers one sanction to States--namely, disapproval of an application. In addition, GEPA regulations authorize States to withhold or suspend payments to a LEA in whole or in part (GEPA, Sec. 434(b)(1)). However, States are reluctant to use this sanction because of its disruptive effect upon local recipients. Furthermore, GEPA requires States to monitor and gives them authority to audit, but does not provide explicit guidance for either function. Nor does it prescribe the procedures to be used to secure repayment of misspent funds. It is even asserted that States may not be aware of the statutory authority they have in GEPA.

A Perspective on Compliance

This chapter has assessed the means provided in the Vocational Education Act of 1963, as amended, to realize the ends of Federal policy. It has reported on the manner and the degree to which they have and have not worked out in the relatively short period of time they have been in operation. The findings of the inquiries conducted by the National Institute of Education point to the conclusion that the agenda of Federal purposes, going back in large part to long before the adoption of the 1976 legislation, has led to sought-for changes in the behavior of the recipients of Federal funds and in the characteristics of the vocational education enterprise. However, the changes occurring in both were neither as uniform nor as thorough as had been hoped for.

The findings permit no verdict of either success or failure to be pronounced on the means adopted to achieve the ambitious goals of Federal policy as a whole. Some have worked more successfully than others, none has worked as effectively as had been expected, none has been a complete failure, and a few have had unexpected and unintended results. The reading on the 1976 amendments, 5 years after their adoption, must be, in short, a mixed one and a cautious one.

The findings of the NIE studies also establish a perspective for considering the issues and problems of compliance with the Federal legislation. It is one which should discourage a predisposition to search for villains, so to speak--for willful violators of legal provisions, or for reluctant or complacent Federal enforcers of the applicable laws, or for State officials indifferent to national goals.

This chapter indicates that a realistic perspective recognizes that the issues and problems of compliance and enforcement are several, interconnected, and complex. They arise from the Federal legal framework itself, from its implementation and interpretation, from the grant-in-aid mechanism for effecting the Federal policy role, from the policies of the States and localities responsible for governing and operating the Nation's public vocational education enterprise, from the scale and diversity of that decentralized enterprise, and from the other educational and civil rights legislation that intersects with the Vocational Education Act.

FOOTNOTES

1. Jean S. Frohlicher, "The Education Amendments of 1976: Their Evaluation in the Senate; Their Directions for the Future," mimeographed paper prepared for NIE Vocational Education Study, August 1981, p. 18.

2. Quoted in Vernon L. Beuke, et al., Implementation of the Education Amendments: A Study of State and Local Compliance and Evaluation Practices (Cambridge, Masachusetts: Abt Associates, Inc., December 1980), p. 16. See also The Vocational Education Study: The Interim Report (Washington, D.C.: Government Printing Office, 1980), Chapter II.

3. U.S. Congress, House, Committee on Education and Labor, The Vocational Education and National Institute of Education Amendments of 1976: Report to Accompany H.R. 12835, House Report No. 94-1701 94th Cong., 2nd Sess., September 27, 1976, p. 29.

4. U.S. Congress, Senate, Committee on Labor and Public Welfare, Education Amendments of 1976: Report to Accompany S.2657, Senate Report No. 94-882, 94th Cong., 2nd Sess., May 14, 1975, p. 66.

5. Frohlicher, op. cit., p. 5.

6. House Report, p. 33.

7. Senate Report, p. 70.

8. U.S. Congress, Committee of Conference, Education Amendments: Report to Accompany S. 2567, House Report No. 94-1701, 94th Cong., 2nd Sess., 1976, p. 219.

9. See Chapter III.

10. The preceding section draws upon The Interim Report, Chapters III and IV, and David Long and Robert Silverstein, An Analysis of the Fiscal and Equity Provisions of the Vocational Education Act (Washington, D.C.: Lawyers' Committee for Civil Rights under Law, September 1981), Chapters I, II, and IV.

11. House Report, pp. 14-15; Senate Report, pp. 76-79.

12. Frohlicher, op. cit., p. 46.

13. The National Advisory Council on Vocational Education has completed a study of the MERC/Q process which is scheduled for publication in the fall of 1981.

14. Quoted in Long and Silverstein, op. cit., Chapter IV.

15. House Report, p. 17.

16. Reasons Cited by 117 Secondary and 18 Postsecondary LEAs for Not Receiving VEA Funds[1]

Reason	Number of LEAs Citing Secondary	Number of LEAs Citing Postsecondary
1. Not eligible	29	5
2. Application rejected	6	2
3. Did not apply because staff or other resources are insufficient for preparing proposals	45	7
4. Did not apply because data requirements are too burdensome	32	4
5. Did not apply because money involved was not enough to make it worthwhile	29	2
6. Did not apply because money was not enough to make up the difficulty of complying with Federal regulations	24	3
7. Eligible for funds but did not accept	3	1
8. Other	34	5

[1] Some districts appear in more than one category, because the survey suggested that LEAs cite as many reasons as were applicable.

Source: "An Analysis of the Distribution of Funds for Vocational Education: A Survey of 10 States"

17. The requirements are burdensome. Although, it is generally not enforced, technically, a recipient accepting Basic Grant funds must operate all the components of its vocational education program included in the maintenance of effort calculation in accordance with Federal requirements. If an LEA applies for and receives $10,000 to improve, for example, the industrial arts component of its vocational education program, it must operate all its other components paid for totally out of State and local funds in compliance with the VEA requirements for operating such

programs. In accordance with the regulation requiring this, Federal administrators have advised that if a State funds a cooperative vocational education component of its overall vocational education program with only State monies, the cooperative vocational education program must meet all of the requirements for operating cooperative vocational programs under the VEA if the State and local funds used for such programs do not exceed the maintenance of effort requirement. If the local funds exceed the maintenance of effort requirement and the use of these funds was not reported under the 5-year plan, then the cooperative program need not satisfy the VEA requirements.

18. The General Education Provisions Act (Sec. 434(a)) authorizes, but does not require, the Secretary to ask a State to submit a plan for monitoring compliance with the Vocational Education Act, which includes (1) periodic on-site visits, (2) periodic audits, and (3) investigation of complaints. To date, the Secretary has not requested compliance plans.

19. See The Interim Report, p. IV-36.

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APPENDIX A

EXTRAMURAL STUDIES AND COMMISSIONED PAPERS

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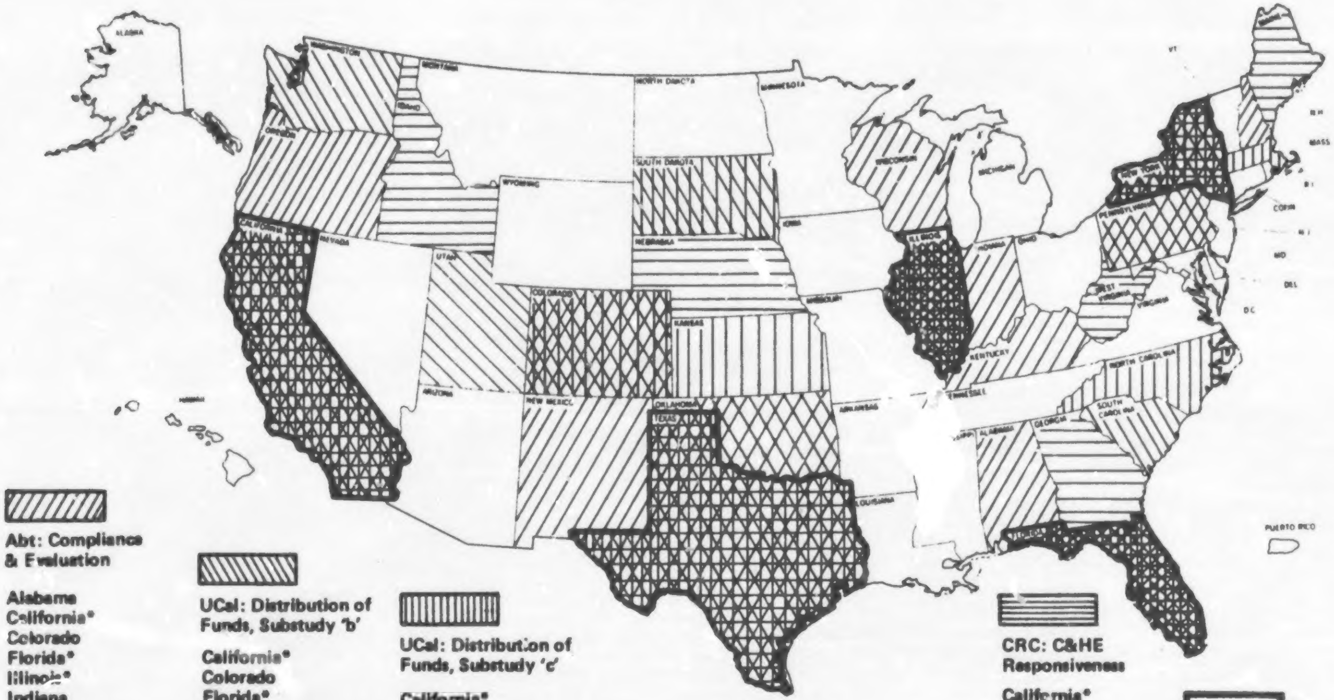
APPENDIX B

VOCATIONAL EDUCATION STUDY STATES



ALASKA
HAWAII
WASHINGTON
OREGON
CALIFORNIA
IDAHO
MONTANA
NEVADA
UTAH
ARIZONA
WYOMING
COLORADO
NEW MEXICO
NORTH DAKOTA
SOUTH DAKOTA
NEBRASKA
KANSAS
OKLAHOMA
TEXAS
MINNESOTA
IOWA
MISSOURI
ARKANSAS
LOUISIANA
WISCONSIN
ILLINOIS
MICHIGAN
INDIANA
OHIO
KENTUCKY
TENNESSEE
ALABAMA
GEORGIA
FLORIDA
SOUTH CAROLINA
NORTH CAROLINA
VIRGINIA
WEST VIRGINIA
PENNSYLVANIA
NEW YORK
VT
N.H.
MASS
R.I.
CONN
N.J.
MD
DEL
DC
PUERTO RICO

▨ **Abt: Compliance & Evaluation**

- Alabama
- California*
- Colorado
- Florida*
- Illinois*
- Indiana
- Kentucky
- New Hampshire
- New Mexico
- New York*
- Oklahoma
- Oregon
- Pennsylvania
- Texas*
- Wisconsin

▧ **UCal: Distribution of Funds, Substudy 'b'**

- California*
- Colorado
- Florida*
- Illinois*
- Kansas
- New York*
- Oklahoma
- Pennsylvania
- South Dakota
- Texas*
- Utah
- Washington

▥ **UCal: Distribution of Funds, Substudy 'c'**

- California*
- Colorado
- Florida*
- Idaho
- Kansas
- Massachusetts
- North Carolina
- New York*
- South Dakota
- Texas*

▤ **CRC: C&HE Responsiveness**

- California*
- Florida*
- Georgia
- Idaho
- Illinois*
- Maine
- Nebraska
- New York*
- Texas*
- West Virginia

□ **AL Nellum: Special Need Populations**

- California*
- Florida*
- Illinois*
- New York*
- Texas*

*Core States are the five States common to all these studies
Total number of states in all five studies: 27

APPENDIX C

VOCATIONAL EDUCATION STUDY STAFF

PRESENT STAFF

Henry David
Project Director and NIE Senior Associate. Appointed September 1977.

Gerry Hendrickson
Assistant Project Director and NIE Senior Associate. Appointed May 1977.

Louise Corman
NIE Associate. Appointed November 1978.

Edwin Dean
NIE Senior Associate. Appointed July 1980. Part time.

Janet Hawkins
Secretary. Appointed October 1980.

Thomasine Hollis
Education Technician. Appointed January 1979.

Marilyn Jones
Clerk-typist. Appointed July 1981. Part time.

Thomas Orians
Secretary. Appointed November 1980.

Rodney Riffel
Educational Policy Fellow. September 1977 - August 1978. NIE Associate. Appointed September 1978.

Bella Rosenberg
NIE Associate. Appointed September 1980.

Stuart Rosenfeld
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FORMER STAFF

Noreen Borkenhagen
NIE Assistant. September 1977 to June 1978.

Marilyn Bujnicki
Secretary. December 1977 to March 1978.

Richard E. Carlson
Director, Division of Vocational and Technical Education, Bureau of Occupational and Adult Education. On detail July 1979 to May 1980.

Mable Dinkins
Clerk-typist. March 1978 to December 1978.

Tanja Hampton
Secretary. April 1978 to September 1980.

Robert C. Harris
NIE Associate. June 1978 to December 1979.

Marion Minot
Interpersonal Act appointee. August 1977 to September 1978.

Thomas Pacquin
Educational Policy Fellow. September 1978 to August 1979.

Cristy Pena
NIE Assistant. September 1980 to July 1981.

Allan Rosenbaum
NIE Senior Associate. August 1977 to October 1980.

Lois Vaughn
Secretary. February 1978 to October 1978.

Robin Williams
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Alison Wolf
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Deborah Wright
Clerk-typist. December 1978 to August 1979.

APPENDIX D

CONSULTANT GROUP MEMBERS

(As of September 1981)

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Kenneth Edwards
International Brotherhood of Electrical Workers

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Ellis Associates, Inc.

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Illinois State Board of Education

John T. Grasso
West Virginia University

Robert C. Harris
Indiana University

Arthur M. Lee
National Center for Research in Vocational Education

Sar Levitan
George Washington University

Duane R. Lund
Staples Public Schools

Elton Mendenhall
Nebraska Research Coordinating Unit

Joe E. Mills
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Marion E. Minot
Cornell University

William Mirengoff
Bureau of Social Science Research

William L. Ramsey
Milwaukee, Wisconsin

Elizabeth Simpson
University of Wisconsin

Brandon Smith
Minnesota Research and Development Center

Gordon I. Swanson
University of Minnesota

Robert E. Taylor
National Center for Research in Vocational Education

Francis T. Tuttle
Oklahoma State Department of Vocational & Technical Education

Gus Tyler
International Ladies' Garment Workers Union

Robert Warmbrod
The Ohio State University

Timothy L. Wentling
University of Illinois

APPENDIX E

SAMPLING AND DATA COLLECTION PROCEDURES FOR THE UNIVERSITY OF CALIFORNIA 10-STATE SURVEY

In order to address issues related to the distribution of vocational education funds, more information was needed than was available or would be available from VEDS. It would be essential to have disaggregated district level data already being collected by the States and to augment them where necessary. The strategy chosen to supplement the States' data was to conduct a survey of LEAs and postsecondary institutions in 10 States.

The 10 States selected for the survey were the five "core" States (see Appendix B) and five more rural States located in different geographic regions. The 10 States were California, Colorado, Florida, Illinois, Kansas, Massachusetts, New York, North Carolina, South Dakota, and Texas. These States should not be viewed as a "representative sample" of the 50 States, but they do account for a large portion of the vocational education enterprise: 39 percent of all students enrolled in vocational education; 34 percent of VEA funds; and 48 percent of the total State and local vocational education funds. They include heavily urbanized States with very large cities (New York, Chicago, and Los Angeles, for example), as well as rural and sparsely settled States. They are located in the Northeast, South, Southwest, Midwest, and Far West, and they have different types of State governance and organization for vocational education. In short, the 10 States serve to capture a number of important differences among States, and can also provide information on a significant part of the Nation's vocational education enterprise.

To select LEAs and institutions within States, the researchers used a stratified random sampling procedure that permits generalizing the results for the sample within each State to the State as a whole. The sample contains seven strata:

Stratum 1: rural LEAs serving no city greater than 10,000 people and also lying outside any standard metropolitan statistical area (SMSA)

Stratum 2: LEAs serving no city greater than 10,000 people but lying within any SMSA

Stratum 3: LEAs serving at least one city with a population between 10,000 and 49,999

Stratum 4: LEAs serving at least one city with a population between 50,000 and 99,999

Stratum 5: LEAs serving at least one city with a population of 100,000 or more

Stratum 6: LEAs in the suburban ring of the State's largest city

Stratum 7: the LEA serving the State's largest city

Because of differences in the data available in the States, separate questionnaires were created for each State, as well as for postsecondary programs in each State.

The survey was reviewed and cleared by the Committee on Evaluation and Information Systems (CEIS) of the Council of Chief State School Officers and by the Federal Education Data Acquisition Council (FEDAC).

In April 1980 the survey was mailed to 941 secondary LEAs and 272 postsecondary LEAs. After two follow-ups by telegrams, the overall response rates were 62 percent and 78 percent for secondary and postsecondary, respectively, as Table E-1 shows--relatively high response rates for mailed questionnaires. Thus, there is reason to believe that the survey data provide a representative picture of local school districts' experiences with vocational education.

TABLE E-1

RESPONSES TO SURVEY

State	Secondary			Postsecondary		
	Sample No.	Returns No.	Percent	Sample No.	Returns No.	Percent
California	94	79	84	24	18	75
Colorado	53	41	77	21	12	57
Florida	22	18	81	28	24	86
Illinois	144	116	80	31	24	77
Kansas	71	41	58	19	14	74
Massachusetts	63	37	59	15	10	67
North Carolina	33	28	85	31	30	97
New York	165	90	55	74	61	82
South Dakota	51	39	76	3	3	100
Texas	245	95	39	26	15	58
TOTAL	941	584	62	272	211	78

Source: University of California Survey Data, 1981

APPENDIX F

MEASURES OF PROGRAM ECONOMIC OPPORTUNITY

The two separate measures of the relative potential of occupational programs (employment opportunities and expected hourly wages) were derived by University of California researchers by (1) matching vocational education programs to specific occupations and (2) then merging the match with data on labor market supply and demand and wage level information. For the first step, matching programs to occupations, the researchers relied primarily on a "crosswalk" prepared by the National Occupational Information Coordinating Committee (Vocational Preparation and Occupations, Volume 1, 1979). This links the six-digit instructional program codes used by the U.S. Department of Education to occupational classification systems such as the Dictionary of Occupational Titles (DOT), the Standard Occupational Classification System (SOC), Occupational and Employment Statistics (OES), and the Census Occupational System. For the majority of instructional programs, identifying the associated occupation is straightforward. However, in some instances, either there is no readily apparent associated occupation or the program prepares students for more than one occupational title.

In using the NOICC crosswalk, as well as the Department of Labor's Occupational Outlook Handbook (1980), at least one suitable occupational title was identified for each six-digit instructional program title. Nonoccupational consumer and homemaking programs, as well as broad-based introductory courses in each of the major two-digit program areas (agriculture, distributive education, health, etc.) were excluded from consideration.

Using this inventory of instructional programs and occupational titles, the University of California researchers derived two indices of economic opportunity. The first, expected hourly wages, was derived from data in the Occupational Outlook Handbook. Average hourly earnings were developed from available information and then an average hourly wage was assigned to each occupational program. When a program prepared students for more than one occupational title, hourly wages for all of them were averaged and assigned to the program. The average hourly wage used is for all persons employed in the occupation, not for entry level workers alone.

The second economic opportunity measure, employment opportunities, is more complex, and was derived by combining four different but related measures: (1) the change in average hourly earnings for a particular occupational title between 1970 and 1978, used as a measure of change in demand and supply relationships; (2) estimates of future employment opportunities supplied in the Occupational Outlook Handbook; (3) Bureau of Labor Statistics projected average of annual openings from 1976 to 1985 (Occupational Projections and Training Data, Bulletin 2020, April 1979); and (4) estimates of employment opportunities relative to present employment presented in State plans for vocational education or accountability reports. The first three measures all relied on national data, but the fourth was specific to each State.

To combine these four measures into a single index, each occupational program was first ranked by each measure from lowest to highest. The programs were then divided into quartiles based on enrollments. Thus, the lowest scored programs, accounting for 25 percent of total enrollments, were all assigned to the bottom quartile and given a score of one; the next higher set of low scored programs, accounting for another 25 percent of enrollments, were assigned the second lowest quartile and given a score of two; and so on. Each program has a score ranging from one to four on each measure. These four scores were summed, and the programs were then ranked on the total score. Finally, as was done with each of the component measures, programs were divided into quartiles based on enrollment and assigned a score from one to four (lowest to highest) to constitute an "employment opportunity index."